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Special Report: The Giant Screen Films of 2019

As many as 14 new original giant-screen films could open in 2019, which would be the largest total since 2002. Topics covered in these titles include the usual mix of exotic locations (7), space (4), and animals (2), plus the third entry in **Stephen Low's** rail trilogy.

In addition, at least two dozen Hollywood features will be screened in multiplex IMAX theaters, some of which will also be shown in institutional IMAX theaters. As this issue goes to press we know the names of 21 of them.

In last year's report on the films of 2018, we predicted that a record 21 films might be released, and although in the end only 13 actually were, that itself is a record unmatched since 2002. Five of those 21 have slipped into 2019:

<i>Angkor Wat</i>	K2 Studios
<i>Cuba</i>	Giant Screen Films
<i>Hidden Pacific</i>	Giant Screen Films
<i>Train Time</i>	Stephen Low Company
<i>Touch the Stars</i>	BIG & Digital

Three other projects expected to open

in 2018 appear to have stalled: *Fire Fighters*, *Sea Of Love*, and *Powered by Wind*.

Topics

Fully half of 2019's films focus on a specific location, a classic GS topic. From the *Great Bear Rainforest* in British Columbia to the Chesapeake Bay (*Expedition Chesapeake*) to *Cuba* to Cambodia (*Angkor Wat: The Lost Empire of Cambodia*) to the *Hidden Pacific* to the mountain ranges of South and North America (*Out of Bounds*) and in *Ancient Caves* all around the world, this year's films will again take viewers to locations they might otherwise never experience. Many of these films will also delve into another perennial favorite subject for GS films: underwater life.

Once they've fully explored the Earth, 2019's GS filmgoers can travel back to 1969 and blast off to the Moon with **Neil Armstrong**, **Buzz Aldrin**, and **Michael Collins** on board *Apollo 11: First Steps*. (A feature-length theatrical version will be released around the same time.) They can *Touch the Stars*, or explore the *Secrets of the Universe*, or prepare for an *Asteroid Impact*.

Animal lovers can romp with *SuperPower Dogs* or follow the efforts of scientists to bring endangered species *Back from the Brink*.

And rail buffs can take another rail excursion with *Train Time*.

DMR films

The Hollywood films being released to IMAX theater in 2019 also include the standard mix of genres, with action and superhero flicks predominating. Comic books titles include *Captain Marvel*,

(see *FILMS* on page 5)

Digital Camera Color Test

by Paweł Achtel, ACS

This article is based on a presentation that the author gave in the Technical Session at the 2018 GSCA Conference in Chattanooga, TN.

Understanding color science is important for those of us making and showing giant-screen films because color is an essential aspect of the vibrant, rich, and inspiring images we aspire to bring to our audiences. The quality (color space) of the pixels we capture and present contributes as much to the overall image quality as the quantity of those pixels (resolution).

My colleagues at the **Australian Cinematographers Society** and I wanted to test the color reproduction capabilities of the currently available high-resolution digital cinema cameras. We were able to obtain four of the five cameras recently used in the **Giant Screen Cinema Association's** 8K Digital Camera Comparison test (see *Summer 2018* and *Sept.-Oct. 2018*). Using laboratory-quality test equipment we were able to objectively measure their ability to sense monochromatic colors, which indicates how faithfully they will reproduce the scenes they are used to capture.

But before we get to the test, I should explain some key principles of color science, which is one of the least understood areas of the filmmaking craft. So let's shine some light on it.

(see *COLOR* on page 9)

Premiering This Month

Touch the Stars

See page 5.

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GSCA Film Expo Preview: March 11–13

The Giant Screen Cinema Association will hold a Film Expo in Los Angeles, CA, March 11–12, followed by a one-day Filmmaker Symposium on March 13. The Film Expo will feature screenings of new films and presentations on films in production and development. The Filmmaker Symposium will “provide in-depth insight into the unique nature of the giant screen filmmaking industry, from development and preproduction all the way through distribution and marketing,” according to the association.

Screenings will be held at the **AMC CityWalk IMAX Theatre** and sessions will take place at the Universal City Hilton nearby. For more information and to register, visit giantscreencinema.com.

Monday, March 11: Film Expo Day 1

8:00 am	Walk to Theater
8:30 am – 5:00 pm	Registration and Information
8:30 am – 8:45 am	Welcome
8:45 am – 9:30 am	Film 1
9:30 am – 10:15 am	Film 2
10:15 am – 10:30 am	Break
10:30 am – 11:15 am	Film 3
11:15 am – 11:50 am	Projects in Development
11:50 am – 12:00 pm	Trailers
12:00 pm – 1:15 pm	Lunch on your own
1:15 pm – 3:15 pm	Films in Production Session
3:15 pm – 3:30 pm	Break
3:30 pm – 4:15 pm	Film 4
4:15 pm – 5:00 pm	Film 5
5:00 pm – 5:45 pm	Film 6
7:15 pm	Dinner on your own

Tuesday, March 12: Film Expo Day 2

7:30 am – 9:00 am	Registration and Information
8:00 am – 9:15 am	GSCA Member Meeting and Breakfast
9:15 am	Walk to theater
10:00 am – 4:45 pm	Registration and Information
10:00 am – 10:45 am	Film 7
10:45 am – 11:30 am	Film 8
11:30 am – 12:15 pm	Film 9
12:15 pm – 2:00 pm	Lunch on your own
2:00 pm – 2:45 pm	Film 10
2:45 pm – 3:30 pm	Film 11
3:30 pm – 3:45 pm	Break
3:45 pm – 4:30 pm	Film 12
4:30 pm – 5:15 pm	Film 13
5:15 pm	Walk to hotel
5:45 pm – 6:45 pm	GSCA Board Meeting
	Dinner on your own

Wednesday, March 13: Filmmaker Symposium

7:30 am – 3:00 pm	Registration and Information
8:00 am – 8:15 am	Welcome
8:15 am – 9:30 am	Tales from the Trenches: First-Time Filmmakers Share Their Lessons Learned
9:30 am – 10:00 am	The Business of the Giant Screen
10:00 am – 10:15 am	Break
10:15 am – 12:00 pm	Understanding the Audience
12:00 pm – 1:45 pm	Lunch and mini trade show
1:45 pm – 3:00 pm	The Art of Storytelling for the Giant Screen
3:00 pm – 3:15 pm	Walk to IMAX Theater
3:15 pm – 5:00 pm	Technology Tools for Giant Screen Filmmaking
5:00 pm – 6:00 pm	Giant Screen Scenes That Have Moved and Inspired
6:00 pm – 8:00 pm	Cocktails



AMC Citywalk IMAX Theatre will host the GSCA Film Expo and Filmmaker Symposium.

IMERSA Summit Preview: Feb. 2–5, Columbus, OH

IMERSA, the association of Immersive Media, Entertainment, Science, and Art, will hold its annual Summit in Columbus, OH, Feb. 2–5. The meeting will feature screenings of nearly 30 fulldome shows, and more than 30 speakers will offer workshops, panel discussions, and talks on fulldome shows and the techniques and technologies for creating and presenting them.

The conference host will be COSI Columbus. For more information and to register, visit IMERSA.org.

Saturday, February 2

9:30 am Workshop A: Navigating IMERSA and Fulldome Basics, Andy Zakrajsek, host.
10:00 am Workshop B: Supporting Immersive Artistry, Clea. T. Waite, Thomas Kraup, Ron Proctor.
11:00 am Workshop C: Advanced Shooting and Editing for Fulldome, Sebastian Gauthier, host; Pavel Karas, Sebastian Gauthier, Yuri Sado, Ryan Jackson.
11:00 am Workshop D: Gaming and Interactivity, Belin Fieldson, host; Sascha Kriegel, Jamie Strecker.
12:30 pm Lunch on your Own at COSI
2:00 pm Workshop E: Designing Immersive Exhibit Experiences, Jeff Bowen, Brian Norris, Bowen Technovation, hosts.
2:00 pm Workshop F: Software for Fulldome, Ben Efram, host; Pat Pomerleau.
3:00 pm Workshop G: Creating Immersive Spaces, Ty Owen, host; Lance Ford Jones, Toshi Takahei, Phillippe Baylaucq, René Chénier
3:00 pm Workshop H: Immersive Audio, Monica Bolles, host; Jeff Merkel, David Ledox, Ricky Graham, Peter Otto.
4:00 pm Workshop I: Live Performers in the Dome, Sébastien Gauthier, host; Loïc Quesnel, Ron Proctor, Jor-

dan Smith.

4:00 pm Workshop J: Immersive Audio (part II), Monica Bolles, host; Pip Greasley, Dale Parson, Charlie Morrow.
5:30 pm Opening Welcome, IMERSA Board, producers
6:00 pm J Walt performance: *Lucid Dreamscapes*
7:00 pm Welcome Reception
8:30 pm Fulldome shows:
Skylark (4:50)
Expedition Reef (28:00)
Birth of Planet Earth (28:00)

chen and Johannes Kraas, producers.

12:30 pm Lunch on your own at COSI
12:30 pm 3D Audio session demonstrations, Monica Bolles, session producer.
Clea T. Waite.

2:00 pm Session I: The Future of Immersive Audio, Monica Bolles, session producer; Kevin Bolen, Joel Douek, Marta Gospodarek, Peter Otto
Fulldome short: *Hidden Garden* (7:00)

3:30 Session J: Sponsor Demos in the Planetarium, Andy Zakrajsek, host; Barco, Big & Digital, Bowen Technovation, Christie Digital, Evans & Sutherland, GOTO Inc, Loch Ness Productions, Ohira Tech/Megastar, Reef Distribution.

5:00 pm Vendor Exposition
6:00 pm 3D Audio session demonstrations (repeat)
7:30 pm Special Live Performance: *SPHERE* (60:00), Robot Koch, Mickael Le Goff, performers

Sunday, February 3

9:00 am Session B: The Influence of Fulldome, Michael Daut, host; Carolyn Collins Petersen, Mark C. Petersen, Micky Remann, Ka Chun Yu.
10:00 am Coffee Break
10:30 am Session C: Exciting Projects, Dan Neafus, producer; Clea Waite, Adrian Waschmann, Thomas Kraupe, Yuri Sado, Toshiyuki Takahei, Ryan Jackson, Alexey Irkov, Björn Jensen.
12:30 pm Lunch on your own at COSI
2:00 pm Session C, continued. Paul Mowbray.
2:30 pm Session D: Creating Audience Impact Through Emotional Connection, Michael Daut, producer.
3:45 pm Session E: Fulldome Issues Forum, Carolyn Collins Petersen, session producer, Andy Zakrajsek, moderator.
5:15 pm Fulldome Show: *Mars 1001* (53:00)

Monday February 4

9:00 am Session G: Weaving a Tapestry of Sound, Michael Daut, session producer; Kevin Bolen
Fulldome short: *Visit* (5:00)
10:30 am Coffee Break
11:00 am Session H: Music in the Service of Storytelling, Carolyn Collins Petersen, session producer; Johannes Kraas, Rocco Helmchen.
Fulldome short: *Specimens of Ephemeral Worlds* (3:36)
11:30 am *Dimensions: Once Upon Our Reality* (51:00), Rocco Helm-

Tuesday February 5

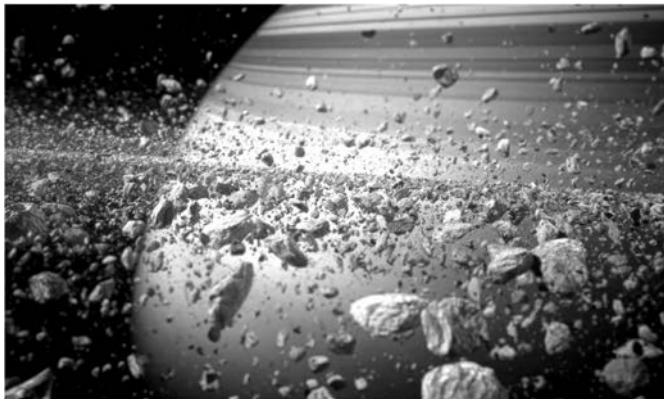
9:00 am Fulldome short: *Sonolumin* (5:00)
Diana Reichenbach, producer.
9:05 am Session K: Live Action In Native Fulldome, Paul Fraser, session producer; Sébastien Gauthier, Julia Redwood, Robin Sip.
10:30 am Coffee Break
11:00 am Fulldome show: *Ningaloo: Australia's Other Great Reef* (27:00)
11:30 am Works in Progress:
In Saturn's Rings
CapComGo
Piano
Switched-on Moog.
12:30 pm IMERSA Tenth Anniversary Luncheon
2:00 pm Session M: Immersive Storytelling, Dan Neafus, session producer, Matt Heenan, host.
Holosense (11:00)
The Game (8:00)
Vestige (11:21)
The Chinese Sky (4:00)
Spirit of the Ice (6:00)
Rocket 3,2,1
Planets 360
Starmaker (28:00)
4:00 pm Session N, Fascinating Fulldome, Dan Neafus, producer/host
HORIZON: Beyond the Edge of the Visible Universe (10:00 excerpt)
Immersive Stargazing Aurora and Hawaii (6:00)
Lost in Time: Wonders of Iceland (12:00)
Moravia 360 excerpt
Sky Tour (13:00)
5:30 pm Fulldome Show: *EXO: Are we Alone?* (25:00)
FUGA (2:56)

COSI Columbus will host IMERSA 2019, Feb. 2–5.

GIANT-SCREEN AND DMR FILMS RELEASED SINCE 2009

(Does not include limited or regional DMR releases. Key to abbreviations is on page 20)

Primary Source Material											
IMAX DMR (live action)				3D				2D			
Animation/CGI			Digital			IMAX DMR (live action)			3D		
IMAX DMR (live action)			3D			2D			3D		
Bold text = 3D			White text = Made for GS			IMAX DMR (live action)			3D		
35	AfterEar	300ROAE	AAOU	10Clover	Aquaman	40					
	CaptPhil	ASM2	BatvSup		AvengIW						
	Elysium	GIJoe	BenHur		BlackPan						
	EnderGam	CATWS	CACW		Commuter						
	GDTDH	Divergen	Deadpool		DarkMind						
30	Gravity	DracUnto	AntMan		Equalizer2						
	H&GWH	EOT	DWHD		FBTGOG						
	Avenger	Hobbit2	Chappie		FSF						
	CloudAt	HGCF	Cinderel		FirstMan						
	DarkKniR	IronMan3	CrimPeak		AlienCov						
25	ASM	JTGS	Godzilla		JWFK						
	DarkShad	GOTG	Everest3D		DarkPhoe						
	Aftersho	Hobbit1	Godzilla		CaptMarv						
	Contag	JuraPark	GOTG		AdAstra						
	AIW	Hercules	Focus		Alita						
	HPDH1	HungGam	IDR		ArteFowl						
	Inceptio	MOS	Geostorm		Avengers4						
	IronMan2	HPDH2	MIF		CaptMarv						
20	PA2	IANF	GodzillakM		DarkPhoe						
	POP	MIB3	Hellboy		Dumbo						
	REA	OTGAP	IT2		Glass						
	TronLeg	JohnWick	IT2		GodzillakM						
	Avatar	ManUNCL	IT2		Hellboy						
	HPHPB	Revenant	IT2		IT2						
	HTTYD	Kingsman	IT2		IT2						
15	NATM2	RedSpar	IT2		IT2						
	LOTG	RogueOne	IT2		IT2						
	StarTrek	Kong	IT2		IT2						
	Megamind	StarTrk3	IT2		IT2						
	TROT	LegoBtmt	IT2		IT2						
	Shrek4	TombRaid	IT2		IT2						
	Watchmen	HTTYD3	IT2		IT2						
	ToyStor3	LionKing19	IT2		IT2						
10	WTWTA	LegоМov2	IT2		IT2						
	QQ	HTTYD3	IT2		IT2						
	Cars 2	LegoMov2	IT2		IT2						
	UA	VenomSon	IT2		IT2						
	MOTUW	HTTYD3	IT2		IT2						
	APE	HTTYD3	IT2		IT2						
	WOTT	HTTYD3	IT2		IT2						
	MNN	HTTYD3	IT2		IT2						
	Lorax	HTTYD3	IT2		IT2						
	PIB	HTTYD3	IT2		IT2						
	Frankenw	HTTYD3	IT2		IT2						
	TOTIA	HTTYD3	IT2		IT2						
	WM	HTTYD3	IT2		IT2						
	DPTP	HTTYD3	IT2		IT2						
	AirRacer	HTTYD3	IT2		IT2						
	FlyMons	HTTYD3	IT2		IT2						
	Meerkats	HTTYD3	IT2		IT2						
	WTP	HTTYD3	IT2		IT2						
	FOTB	HTTYD3	IT2		IT2						
	GWS	HTTYD3	IT2		IT2						
	LastReef	HTTYD3	IT2		IT2						
	HidUniv	HTTYD3	IT2		IT2						
	Rescue	HTTYD3	IT2		IT2						
	LOF	HTTYD3	IT2		IT2						
	RME	HTTYD3	IT2		IT2						
	SpacJunk	HTTYD3	IT2		IT2						
	Jerusal	HTTYD3	IT2		IT2						
	IOLM	HTTYD3	IT2		IT2						
	TTA	HTTYD3	IT2		IT2						
	JTTSP	HTTYD3	IT2		IT2						
	WOTA	HTTYD3	IT2		IT2						
		HumpbWh	IT2		IT2						
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	



Touch the Stars

(from FILMS on page 1)

Avengers: Endgame, *Spider-Man: Far From Home*, and *The New Mutants* from Marvel Studios; *Dark Phoenix*, an entry in the X-Men franchise from Twentieth Century Fox; *Shazam!*, a DC Comics tale from Warner Bros. Pictures; *Alita: Battle Angel* from Fox, based on a cyberpunk manga (Japanese comic book); and a reboot of *Hellboy* from Lionsgate.

Other action titles include M. Night Shyamalan's *Glass*; Fox's *Ad Astra*; *Men in Black International* from Sony Pictures Entertainment, *Artemis Fowl* from Walt Disney Pictures, and *Star Wars, Episode IX*, also from Disney.

But **Imax Corporation** continues to increase its family-friendly fare with a live-action remake of Disney's classic *Dumbo* and a quartet of sequels: *Lego Movie 2: The Second Part*, *How to Train Your Dragon: The Hidden World*, *Toy Story 4*, and *Frozen 2*.

James Cameron's long awaited sequel to his smash hit *Avatar* (2009) had originally been expected in 2018, but is now set for release in late 2020. He is reportedly shooting it in high dynamic range (HDR) and high frame rate (HFR), although what actual rate he may be using hasn't been revealed.

Below are the giant-screen films of 2019, listed chronologically by their announced release dates. Summaries in quotation marks were provided by the producers. Additional production updates can be found in "In Production" on page 10.

Underlined titles indicate that the film is in 2D. All others are 3D.

DMR titles officially announced by

Imax Corporation at press time are listed in the box at right. This list does not include films that will be shown only in specific countries or regions.

Touch the Stars

Produced by **Afterglow Studios** and distributed by BIG & Digital. Directed and produced by **Luke Ployhar**, written by

Scott Pearson. Release: January.

"*Touch the Stars* centers on mankind's probes used in exploration of our solar system and the galaxy beyond. The film traces the path to space through the history of NASA's probes, orbiters, and landers, from the heart of our solar system to the surface of the other planets and moons, to the grand tour of the Voyager spacecraft through the outer planets and beyond. Created with the latest imagery and scientific data, *Touch the Stars* uses inspiring real footage and three-dimensional vistas of our solar system and interstellar space to transport audiences to planets and distant stars alongside these intrepid robot explorers. *Touch the Stars* will be released in stunning 8K resolution."

Great Bear Rainforest (wt)

Produced by **Spirit Bear Entertainment** and distributed by **MacGillivray Freeman Films**. Directed, produced, photographed, and written by **Ian McAllister** and **Jeff Turner**, and scored by **Hans Zimmer**. Executive producers: **Byron Horner** and **Kyle Washington**. Narrated by **Ryan Reynolds**. Release: Feb. 15.

Filmmakers Ian McAllister and Jeff Turner and executive producers Kyle Washington and Byron Horner of Spirit Bear Entertainment are partnering with MacGillivray Freeman Films to distribute a beautiful giant-screen film about one of the rarest animals on Earth: the

2019 DMR FILMS

Title	Dist	Release
Glass	WDPD	Jan. 18
<i>The Lego Movie 2: The Second Part</i>	WB	Feb. 8
<i>Alita: Battle Angel</i>	FOX	Feb. 14
<i>How to Train Your Dragon: The Hidden World</i>	UP	Mar. 1
<i>Captain Marvel</i>	WDPD	Mar. 8
<i>Dumbo</i>	WDPD	Mar. 29
<i>Shazam!</i>	WB	Apr. 5
<i>Hellboy</i>	LG	Apr. 12
<i>Avengers: Endgame</i>	WDPD	Apr. 26
<i>Godzilla: King of Monsters</i>	WB	May 31
<i>Dark Phoenix</i>	FOX	Jun. 7
<i>Men in Black International</i>	SONY	Jun. 14
<i>Toy Story 4</i>	WDPD	Jun. 21
<i>Spider-Man: Far From Home</i>	SONY	Jul. 5
<i>The Lion King</i>	WDPD	Jul. 19
<i>The New Mutants</i>	FOX	Aug. 2
<i>Artemis Fowl</i>	WDPD	Aug. 9
<i>IT: Chapter 2</i>	TBD	Sept. 6
<i>Frozen 2</i>	WDPD	Nov. 22
<i>Star Wars: Episode IX</i>	WDPD	Dec. 20

fabled all-white Spirit Bear. These remarkable creatures live in the lush temperate rainforests of British Columbia on Canada's west coast, where they hold almost mythic status among the region's indigenous people. Shot exclusively for the giant screen, ***Great Bear Rainforest*** (working title) will offer a remarkable journey into one of the planet's most spectacular wildernesses — a land of wolves, grizzly bears, humpback whales, sea lions, sea otters, and others — as it explores the secret world of the Spirit Bear."

Cuba

Produced by **Golden Gate 3D** and distributed by Giant Screen Films. Directed by **Peter H. Chang**, produced by **Violet** (see FILMS on page 6)



Great Bear Rainforest

Cuba

(from *FILMS* on page 5)

Angell, Peter H. Chang, **Josue Lopez Lozano**, and **Robert Mooring**, photographed by Peter H. Chang, **Christopher Doyle**, **Justin Henning**, and Peter Zuccarini, written by Robert Mooring and **Mose Richards**. Executive producers: **Kelyn Brannon**, **Mike Day**, **Dave Duszynski**, **Joshua Goltz**, **Don Kempf**, **Neil Nightingale**, **Jonathan Rowe**, and **Andy Wood**. Cast: **Eusebio Leal**, **Patricia Torres**, **Fernando Bretos**, and **Daria Siciliano**. Release: early 2019.

Cuba tells the powerful story of a land preserved in time, yet poised on the cusp of dramatic change. The nation's vibrant culture, meticulously maintained colonial architecture, and pristine ecosystems provide a vivid window into the island's history and spirit. *Cuba* will transport audiences across breathtaking landscapes, under the ocean surface to iridescent reefs, and into streets throbbing with music and dance in the heart of Havana.

Through the eyes of Cuban artists, historians, and scientists, the film provides an intimate look this vivacious island na-

tion. Filmed exclusively for the giant screen format, *Cuba* reveals why Cuba continues to stir the imagination of the world. *Cuba* is produced by Golden Gate 3D in association with **BBC Earth**, Giant Screen Films, and the **Giant Dome Theater Consortium**.

Superpower Dogs

Produced by **Cosmic Picture** and distributed by **Imax Corporation** and **Cosmic Picture**. Directed by **Daniel Ferguson**, produced by **Taran Davies**, **George Duffield**, **Dominic Cunningham-Reid**, and **Daniel Ferguson**, photographed by **Reed Smoot**, written by **Daniel Ferguson**, and scored by **Michael Cusson**. Release: March 9.

"Join an immersive IMAX adventure to experience the life-saving superpowers and extraordinary bravery of some of the world's most amazing dogs. In this inspiring true story, our best friends are also real-life superheroes. Journey around the globe to meet remarkable dogs who save lives, and discover the powerful bond they share with their human partners. Follow Halo, a rookie puppy training to join one of the most elite disaster response teams in America. Meet Henry, an avalanche rescue expert in the Canadian Rockies; Reef, a Newfoundland lifeguard with the Italian coast guard; Ricochet, a Californian surf legend helping people with special needs; and the Bloodhound brothers, Tipper and Tony, who are leading the fight to save endangered species in Africa. As we discover the incredible abilities of dogs and the astonishing science behind their superpowers, we'll never look at our best friends the same way again!"

Expedition Chesapeake

Produced by **Whitaker Center Productions** and **Via Studios Global** and distributed by **BIG & Digital**. Directed and written by **Greg Matosky**, produced by **Ben Payavis II**, and photographed by **James Neihouse**. Executive producers: **Tom Currá** and **Jeff Corwin**. Cast: **Jeff Corwin**. 2D. Release: March 20.

"Expedition Chesapeake, A Journey of Discovery is the first giant-screen film to capture the stunning natural beauty of the largest estuary in North America. The film displays the incredible diversity found in the watershed with thousands of rivers and streams that feed the Chesapeake Bay with billions of gallons of fresh water each day. Water is a constant element in the film, as it is the sustaining force for all forms of life in the watershed as well as the bay.



Expedition Chesapeake



Superpower Dogs



Hidden Pacific

and estuaries wherever we live."

Hidden Pacific

Produced by **Tandem Stills + Motion** and distributed by Giant Screen Films. Directed by **Ian Shive**, produced by Ian Shive, **Erika Nortemann**, and **Mark Fletcher**, photographed by Ian Shive, written by **Mark Fletcher**, and scored by **Cody Westheimer**. Executive producers: **Andy Wood**, Ian Shive, and **Alice Garrett**. Starring **Jessica Kim**, **Susan White**, and **Charlie Pelizza**. Release: April 22.

"*Hidden Pacific* is a pioneering film that profiles some of the Pacific Ocean's



Angkor Wat: The Lost Empire of Cambodia

most beautiful islands and marine national monuments – breathtaking places that will leave audiences with a deep-felt appreciation for the beauty of nature untouched by civilization. The storied histories of Palmyra, Midway, and other atolls – from the WWII Pacific theater to their present environmental recovery and ecological research initiatives – provide the platform from which the film explores a diversity of science and human stories. *Hidden Pacific*

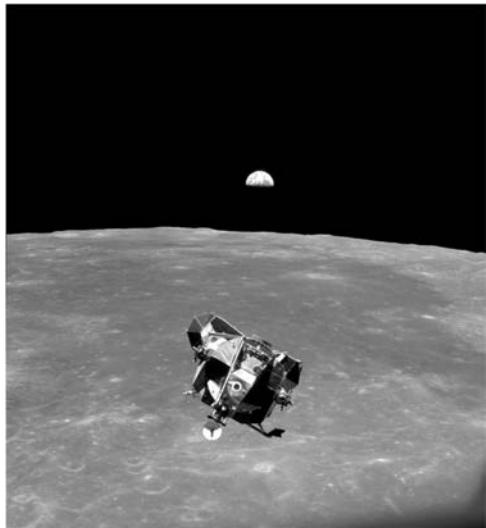
is produced by Tandem Stills + Motion, in cooperation with the U.S. Fish & Wildlife Service and affiliated organizations, which provided the filmmakers with unprecedented access to the bio-secure zones of the marine monuments. Launching globally in museum, zoo, aquarium, giant-screen and IMAX cinemas on Earth Day 2019."

Angkor Wat: The Lost Empire of Cambodia

Produced by **Definition Films** and **Helio Projects** and distributed by **K2 Studios**. Directed by **Murray Pope** and written by **John Weiley**. Release: April.

"A civilization that rose to become the envy of the world, only to disappear; a mystery waiting to be unlocked by modern archaeologists, scientists, and explorers. Following an epic spree of religious building whose scale and ambition rivals the pyramids of Egypt, Angkor is the scene of one of the greatest vanishing acts of all time. The Khmer kingdom lasted from the 9th to the 15th centuries and at its height dominated a large swathe of South-East Asia from Myanmar in the west to Vietnam in the East. As many as one million people lived in Angkor, the capital, which sprawled across an area the size of New York's five boroughs, making it the most extensive urban complex of the pre-industrial world. By the late 16th century, the once-resplendent capital of the empire, with its thousands of elaborate temples and religious monuments, was being overrun by the surrounding jungles.

Many experts have attempted to provide answers, and theories abound. Thirteen hundred carved inscriptions survive on temple doorjambs but the Khmer people of Angkor left not a single word explaining their kingdom's collapse. This will be a visually stunning film, an epic adventure



Apollo 11: First Steps

where science, mystery and ancient civilization intersect."

Apollo 11: First Steps

Produced by **Statement Pictures** and **CNN Films** and distributed by MacGillivray Freeman Films. Directed by **Todd Douglas Miller**, produced by Todd Douglas Miller, **Thomas Petersen**, **Evan Krauss**. Executive producers: **Amy Entelis**, **Courtney Sexton**, **Josh Braun**. 2D. Release: May 17.

"Timed for release around the 50th anniversary of the first lunar landing, *Apollo 11: First Steps* gives a thrilling, direct-cinema experience of NASA's historic Apollo 11 mission. With the assistance of NASA, National Archives, and a global team of researchers, the filmmakers have unearthed a treasure trove of never-before-seen footage and audio recordings to reconstruct the mission in astonishing detail. Told primarily with archival material

(see **FILMS** on page 8)



Secrets of the Universe



Train Time

(from **FILMS** on page 7)

als, the film puts audiences back in 1969 when the world united to watch man's first steps on the moon. From Emmy Award-winning filmmakers of *Dinosaur 13*, Statement Pictures, in partnership with CNN Films and distributed by MacGillivray Freeman Films, *Apollo 11: First Steps* will premiere May 17, 2019."

Secrets of the Universe

Produced by the **Stephen Low Company** and distributed by K2 Studios. Directed and photographed by Stephen Low and produced by **Pietro Serapiglia**. Executive producer: K2 Studios. Narrator: **Simon Helberg**. Release: May.

"We are at the beginning of a period of unprecedented technological advancement, catalyzing a new age of scientific discovery. Travel with us on this immersive giant-screen film as we explore the most exciting machines ever conceived by man, including the Large Hadron Collider and James Webb Space Telescope. See how these new experiments allow us to look deeper into our origins and unveil

the mysteries of dark energy, dark matter, and extra dimensions."

Train Time

Produced and distributed by Stephen Low Company. Directed and written by Stephen Low, produced by Pietro Serapiglia and Stephen Low. Executive producer: **Paul Globus**. 2D. Release: September.

"**Train Time** follows the trek of a modern freight train through the communities it serves, revealing the beauty, vastness, and diversity of the American landscape and the evolving role and remarkable heritage of railroading, a profession integral to the fabric of modern civilization.

"Along parallel bands of steel, we race through prairies, mountains, and deserts, through cities, towns, and wilderness. Along the way, railroaders and the tracks and trains themselves offer up a remarkable story of engineering, of frontier-taming and community-building, of human ingenuity and industry."

Out of Bounds

Produced by **Wild Pacific Media** and distributed by K2 Studios. Directed by **Caspar Mazzotti**, produced by **Nick Robinson, Dave Gross, and Mark Kresser** photographed by Nick Robinson, and written by **Mark Krenzien** and Caspar Mazzotti. Cast: **Torah Bright**. Release: October.

"**Out Of Bounds** will follow Australian Olympic gold medalist snowboarder Torah Bright on a journey from the penguins of Antarctica, to the glaciated peaks of Alaska. This is the American Cordillera, the longest chain of mountain ranges in the world. Critical to life, they fill rivers, sway weather, shape history, and

provide sanctuary to diverse and unique wildlife, their infinite allure and beauty always matched by inherent danger. Ride with Torah as we meet the athletes, scientists, and adventurers who all seek a deeper understanding of the mountains that inspire them."

Ancient Caves

Produced by **Oceanic Research Group** and distributed by MacGillivray Freeman Films. Directed and photographed by **Jonathan Bird**, produced and written by Jonathan Bird and **Art Cohen**, and scored by **Bruce Zimmerman**. Executive producer: **Shaun MacGillivray**. Cast: **Dr. Gina Moseley, Dr. Larry Edwards, Brian Kakuk, Todd Kelly, and Dr. Keith Tinker**. 2D. Release: Fall.

"Dr. Gina Moseley is a scientist on a



Ancient Caves

mission as she travels the world, exploring vast underground worlds in her quest to unlock the secrets of the Earth's ancient climate in the most unlikely places: caves. Her need for underwater samples leads her to world-renowned cave diver Brian Kakuk. Brian can go where Gina can't, and together they can reach places very few humans will ever go. **Ancient Caves** brings science and adventure together as the team embarks on an expedition to some of the world's most extreme caves, both above and below the water, to learn how fast the climate can change, and how it has affected human civilization. *Ancient Caves* was shot in dome-native format."



Out of Bounds

Digital Camera Color Test

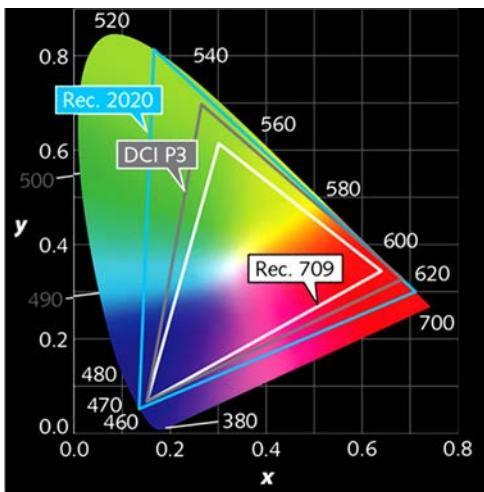


Figure 1: CIE 1931 Color Space, and the gamuts of three color standards.

(from **COLOR** on page 1)

Monochromatic colors

Figure 1 depicts XY chromaticity space, also known as the CIE 1931 diagram. It shows the full gamut of colors that humans can perceive. (Its reproduction here on a printed page is, of course, not perfect, which would require a specialized display.) On the outer curved edge, also known as the spectral locus, are all the monochromatic colors. These are colors of only one wavelength. Unlike all of the colors inside the diagram, monochromatic colors cannot be reproduced by mixing other colors. The numbers between 460 and 700 on the spectral locus represent their wavelengths in nanometers (one billionth of a meter). These monochromatic colors are always fully saturated and range from blue to cyan to green to yellow to red.

The straight line at the bottom between red and blue is called the magenta line. Magenta is *not* a monochromatic color; it is always composed of a mixture of blues and reds. Although the magenta line contains fully saturated colors, they are not monochromatic.

All colors inside the spectral locus are less saturated than those on the edge, and they are always a mixture of at least two monochromatic colors. They can also be reproduced by mixing different *combinations* of two or more other colors. For

example, grey can be reproduced as a mixture of red, green and blue, or as a mixture of yellow and cyan. To humans they will look indistinguishable even though their physical composition is entirely different.

Like humans, most digital cameras contain sensors that capture three primary colors, usually red, green, and blue. Filters over the sensor's pixels eliminate light in all but one primary color, and are arranged in a pattern called the color filter array. The most common pattern is a Bayer pattern consisting of two green, one blue and one red filter per cluster.

Color space

Color space is an abstract mathematical model which describes the range of colors as combinations (tuples) of three or four color values (e.g., RGB). Here we will look at different RGB color gamuts that are commonly used in cinematography.

A color gamut is a subset of colors that can be accurately represented in a given color space. Several different gamuts have been established as standards for various applications.

The **Rec. 709** color gamut (more formally, ITU-R Recommendation BT.709) is used in most computer monitors and high-definition televisions. It covers approximately 36% of all colors that humans can perceive. Its most saturated primary RGB colors are not exactly pure monochromatic colors, and do not lie exactly on the spectral locus, but rather within it. As you can see from the position of the upper vertex of the Rec. 709 triangle in Figure 1, the green primary in particular is quite far from the green on the spectral locus.

The most common RGB color gamut for motion pictures is **DCI-P3**, which was defined by the **Digital Cinema Initiatives** specifically for digital cinema. It is an improvement over Rec. 709, reproducing approximately 45% of all visible colors.

Rec. 2020 is a relatively new and much wider color gamut that covers about 75.8% of all visible colors. Few if any currently available displays or cameras can cover the entire Rec. 2020 gamut.

Rec. 2020 is the widest color gamut an RGB device can reproduce, because its RGB primaries are fully saturated monochromatic colors. Other gamuts have different set of primaries but cannot offer more colors, only different ones. Note that Rec. 709's primaries (the vertices of the triangle) are not fully saturated colors, i.e., they are inside the spectral locus. DCI-P3's primaries are closer to the spectral locus, and Rec. 2020's are on it.

This is why we chose Rec. 2020 as the output color gamut for our camera test.

Mapping colors within gamuts

As depicted in Figure 1, each of the gamuts includes and excludes certain colors. If a given color C lies within the RGB triangle of the gamut's primaries, it will be reproduced accurately.

On the other hand, if the color falls outside the given RGB gamut, it can be only approximated by a less-saturated color on the same vector. To see how it will be reproduced (see Figure 2), we draw a line (the color vector) between the gamut's white point and the point outside the gamut. (The white point is the mixture of the primaries that is defined as white. White points vary based on the gamut used.) The intersection with the RGB triangle at point A is the representation of color C within that gamut. Such differing

(see **COLOR** on page 12)

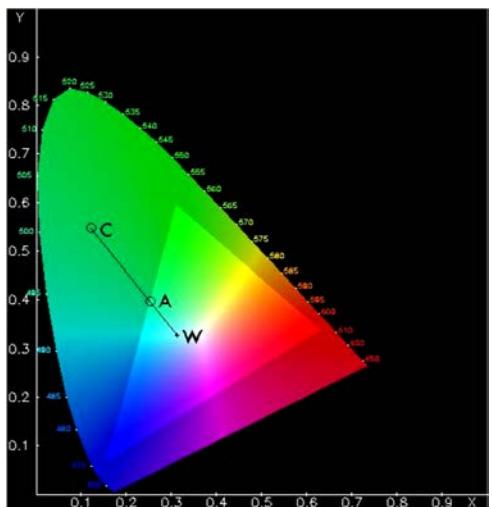


Figure 2: Mapping a color outside the color gamut (C) will appear as a less saturated version (A).



* New listing.

All films are 3D unless noted; underlined titles are 2D.

Updated information is printed in bold.

Unless noted, all films run about 40 minutes.

Great Bear Rainforest

Spirit Bear Entertainment; distributor: MacGillivray Freeman Films; directors, producers, DPs, script: Ian McAllister, Jeff Turner; score: Hans Zimmer; executive producers: Byron Horner, Kyle Washington. Narrator: Ryan Reynolds. Release: Feb. 15.

– Principal photography is complete, post production is under way.

Cuba

Golden Gate 3D; distributor: Giant Screen Films; director: Peter H. Chang; producers: Violet Angell, Peter H. Chang, Josue Lopez Loxano, Robert Mooring; DPs: Peter H. Chang, Christopher Doyle, Justin Henning, Peter Zuccarini; script: Robert Mooring, Mose Richards; executive producers: Kelyn Brannon, Mike Day, Dave Duszynski, Joshua Goltz, Don Kempf, Neil Nightingale, Jonathan Rowe, Andy Wood. Cast: Eusebio Leal, Patricia Torres, Fernando Bretos, Daria Siciliano. Release: February.

Superpower Dogs

Cosmic Picture; distributor: Imax Corporation, Cosmic Picture; director: Daniel Ferguson; producers: Taran Davies, George Duffield, Dominic Cunningham-Reid, Daniel Ferguson; DP: Reed Smoot; script: Daniel Ferguson; score: Michael Cusson. Release: March 9.

– Picture is locked. Music, color timing, sound design and visual effects work under way.

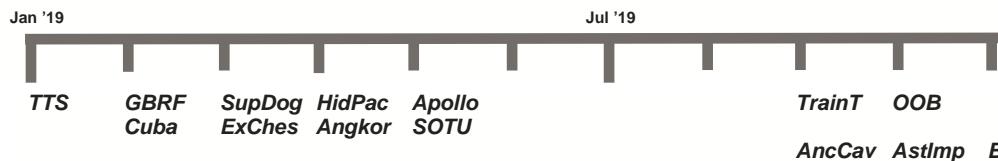
Expedition Chesapeake

Whitaker Center Productions, Via Studios Global; distributor: BIG & Digital; director, script: Greg Matosky; producer: Ben Payavis II; DP: James Neihouse; executive producers: Tom Currá, Jeff Corwin. Cast: Jeff Corwin. 2D. Release: March 20.

– Principal photography is complete, post production is under way.

Hidden Pacific

Tandem Stills + Motion; distributor: Giant Screen Films; director: Ian Shive; producers: Ian Shive,



Erika Nortemann, Mark Fletcher; DP: Ian Shive; script: Mark Fletcher, score: Cody Westheimer; executive producers: Andy Wood, Ian Shive, Alice Garrett.

Cast: Jessica Kim, Susan White, Charlie Pelizza.
Release: April 22.

– Post production, narration, and editing are under way.

Angkor Wat: The Lost Empire of Cambodia

Definition Films, Helio Projects; distributor: K2 Studios; director: Murray Pope; writer: John Weiley. Release: April.

Apollo 11: First Steps

Statement Pictures, CNN Films; distributor: MacGillivray Freeman Films; director: Todd Miller; producers: Todd Douglas Miller, Thomas Petersen, Evan Krauss. Executive producers: Amy Entelis, Courtney Sexton, Josh Braun. 2D. Release: May 17.

– Post production is under way.

Secrets of the Universe

Stephen Low Company; distributor: K2 Studios; director: Stephen Low; producer: Pietro Serapiglia; executive producers: K2 Studios. Narrator: Simon Helberg. Release: May.

– November 2018: Filmed Large Hadron Collider and scientists at CERN and Geneva.

Train Time

Stephen Low Company; distributor: Stephen Low Company; director, script: Stephen Low; producers: Pietro Serapiglia, Stephen Low; executive producer: Paul Globus. 2D. Release: September.

Out of Bounds

Wild Pacific Media; distributor: K2 Studios; director: Caspar Mazzotti; producers: Nick Robinson, Dave Gross, Mark Kresser; DP: Nick Robinson; script: Mark Krenzien, Caspar Mazzotti. Cast: Torah Bright. Release: October.

– November: Filmed landscapes, wildlife, snowboarding, and climbing in Antarctica.

Ancient Caves

Oceanic Research Group; distributor: MacGillivray Freeman Film Distribution; director, DP: Jonathan Bird; producers: Jonathan Bird, Art Cohen; script: Jonathan Bird, Art Cohen; score: Bruce Zimmerman; executive producer: Shaun MacGillivray. Cast: Dr. Gina Moseley, Dr. Larry Edwards, Brian Kakuk, Todd Kelly, Dr. Keith Tinker. All digital formats. 2D. Release: Fall.

– November: Submerged Mayan remains in Mexico.
– Principal photography is complete, post production is under way.

Asteroid Impact

Imax Corporation, Huahuang Pictures; distributor: Imax Corporation; director: W.D. Hogan; producers: Jini Durr, Phil Groves; DP: Sean MacLeod Phillips; script: Phil Groves; executive producers: Anna Chi, Phil Groves. Cast: Len J. Phillips, Steve Tsang, Bernadette Janssen. Release: Fall.

– Principal photography is complete, post production is under way.

Back From the Brink

Sean Casey Productions; distributor: Cosmic Picture; director, DP: Sean Casey; producers: Jen Casey, Sean Casey; script: Mose Richards. Release: Fall.

Snow

St. Thomas Productions, nWave Studios; distributor: nWave Pictures; directors: Cyril Barbançon, Jacqueline Farmer; producer: Jacqueline Farmer; DPs: Cyril Barbançon, Jacqueline Farmer; script: Philippe Chappuis; score: Franck Marchal; executive producer: Eric Dillens. Release: Spring 2020.

Einstein's Incredible Universe (wt)

Cosmic Picture; distributor: tba; director: Daniel Ferguson; producers: Taran Davies, George Duffield, Daniel Ferguson; script: Daniel Ferguson, Mose Richards; DP: Reed Smoot. Release: fall 2020.

Wild Wonders of China

Transcendent Media, Blue Sky Aerial & Specialist Filming; distributor: tba; director: tba; producers: Peta Milan, Staffan Widstrand, Vicky Degerfeldt; DP: Peter Degerfeldt. Release: fall 2020.

– November 2018: Filmed wild snow leopards in 8K.

Colours of China

Making Movies/ China Intercontinental Communication Company/ Gebrueder-beetz Filmproduktion; distributor: tba; executive producer: James Heyward. Release: 2020.

– November 2018: Filmed the Peking Opera, and in Jingdezhen, porcelain capital of China.

Cool Cities

Wild Pacific Media; distributor: K2 Communications. Release: 2020.

Dinosaurs of Antarctica

Giant Screen Films; distributor: Giant Screen Films; director: David Clark; producers: Don Kempf, Deborah Raksany, Andy Wood; DP: Reed Smoot; script: Deborah Raksany, Andy Wood. Release: 2020.

– November 2018: Filmed in Illinois.
– January: Filming dinosaur backplates in New Zealand.
– February: CGI compositing begins.

Elephant

Wild Expectations, Ltd.; distributor: tba. Release: 2020.

Feathered Dinosaurs (wt)

Saint Thomas Productions; distributor: nWave Pictures. Narrator: James Faulkner. Release: 2020.

Ireland

MacGillivray Freeman Films; distributor: MacGillivray Freeman Films. Release: 2020.

Jan '20

Jul '20

Jan '21

CoolCit	DOA	Eleph	Snow	FeaDin	Ireland	JTTGMR	Leona	MFFNAF	EIU	WWOC	Sereng	SeaLion	Wings	AntITU
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- Principal photography is complete, post production is under way.

Journey to the Great Mayan Reef (wt, formerly *The Dolphin Ambassador*)
Milbrand Cinema; distributor: tba; director, producer, DP: Lance Milbrand; editor: Dave Choice; score: Icarus Music. Cast: Kathleen Dudzinski, Eldon Bolton. Release: 2020.

Leonardo da Vinci: The Last Interview (wt)
Camera Lucida Productions; distributor: MacGillivray Freeman Films; director: Francois Bertrand; DP: Vincent Mattias; script: Serge Bramly, Francois Bertrand. Executive producer: Francois Bertrand. Release: 2020.

MFF's New Adventure Film
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films. Release: 2020.

- Principal photography is complete, post production is under way.

Secrets of the Sands
Atlantic Productions; distributor: Serengeti Entertainment. Release: 2020.

Secrets of the Serengeti

Digital Crossing Productions; distributor: SK Films; director, DP: Michael Dalton-Smith; producers: Michael Dalton-Smith, Jonathan Barker; script: Michael Dalton-Smith, Wendy MacKeigan; executive producer: Jonathan Barker. Release: 2020.

Sea Lion: Life by a Whisker

Definition Films; distributor: tba. Release: 2020.

Wingsuit Flyers

Grand Schema; distributor: K2 Communications; director: Christopher J. Scott; producers: John Moll, Christopher J. Scott, Aschi Michel, Tom Fore; DP: Robert Hollingworth; script: Christopher J. Scott; executive producers: Rob Sharps, Doug Greenstein, W. Kyle Gore, Daniel Verbic, Tom McCollum. Release: 2020.

Antarctica 3D: Into the Unknown *

BBC Earth; distributor: tba; director: Fredi Devas; producers: Jonny Keeling, Myles Connolly; executive producer: Jonathan Williams. Release: 2020/2021.

- Early 2019: Filming in the Antarctic Peninsula and South Georgia Island.

DMR FILMS:

Title	Dist	Release
Glass	UP, WDPD	1/18/19
<i>The Lego Movie 2: The Second Part</i>	WB	
	Feb 8	
<i>Alita: Battle Angel</i>	FOX	2/14/19
<i>How to Train Your Dragon: The Hidden World</i>	UP	
	3/1/19	
<i>Captain Marvel</i>	WDPD	3/8/19
<i>Dumbo</i>	WDPD	3/29/19
<i>Shazam!</i>	WB	4/5/19
<i>Hellboy</i>	LG	4/12/19
<i>Avengers: Endgame</i>	WDPD	4/26/19
<i>Godzilla: King of Monsters</i>	WB	5/31/19
<i>Dark Phoenix</i>	FOX	6/7/19
<i>Men in Black International</i>	SONY	6/14/19
<i>Toy Story 4</i>	WDPD	6/21/19
<i>Spider-Man: Far From Home</i>	SONY	7/5/19
<i>The Lion King</i>	WDPD	7/19/19
<i>The New Mutants</i>	FOX	8/2/19
<i>Artemis Fowl</i>	WDPD	8/9/19
<i>IT: Chapter 2</i>	TBD	9/6/19
<i>Frozen 2</i>	WDPD	11/22/19
<i>Star Wars: Episode IX</i>	WDPD	12/20/19



Director Ian Shive filming Laysan albatrosses in the Midway Atoll National Wildlife Refuge for *Hidden Pacific*.

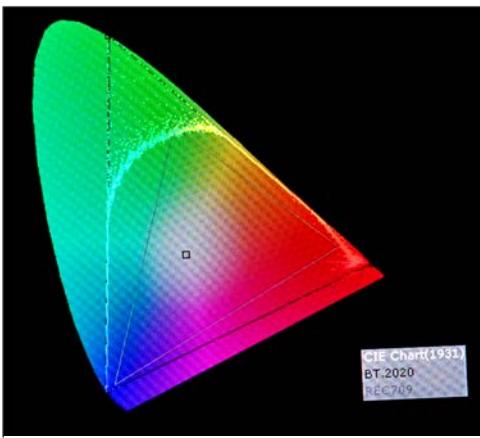


Figure 3: Arri Alexa

(from **COLOR** on page 9)

representations cause inaccuracies known as color shifts.

If two distinct colors are captured by a camera as the same color — for example, red is reproduced as magenta and magenta is reproduced as magenta — no amount of post-production processing can separate them. For this reason, we tried in our tests to assess each camera's ability to discern different colors and to reproduce them accurately.

Fully saturated colors (including fully saturated primaries) should be invariant, meaning they should remain unchanged regardless of the white point chosen. Only less-saturated colors will change depending on the choice of white point. (We noticed that this was not the case in some of the cameras that we tested.)

Premise of the test

The principle of our test was to expose camera sensors to the entire range of pure

monochromatic light. Because they have RGB sensors, cameras should be able to reproduce perfectly *at most* three of those colors: 630 nm for primary red, 532 nm for the primary green, and 467 nm for the primary blue. (However, as we pointed out above, some gamuts have primaries that are not monochromatic, but are within the spectral locus.) Even with cameras whose primaries are on the spectral locus, we can expect that all other monochromatic colors will be mapped as out-of-gamut colors to the most saturated colors that the target color gamut can reproduce.

Further, we expect that the cameras should not see any magenta colors when presented with monochromatic light, because magentas are not monochromatic. The monochromator-spectrometer we used does not produce magentas or any desaturated colors. Accordingly, we expected to see only the saturated blue, cyan, green, yellow and red colors in Rec. 2020 color gamut that the system is capable of reproducing, or a little bit less than that.

The setup consisted of a Jarrel-Ash Monochromator-Spectrograph with a 300mm ruled diffraction grating, which projects a monochromatic collimated (parallel beam) spectrum between 180nm and 750nm wavelength directly onto the image plane of the camera's sensor. (See *picture of the test setup on the opposite page*.) The advantage of this approach is that, unlike using color charts, we can precisely control the colors in a way that is not affected by ambient lighting, color dyes, lenses, or any other external factors.

The Cameras Tested

The cameras that we chose for the test were:

ARRI Alexa LF
Panavision DXL2
RED Monstro
Sony Venice

These cameras all have large-format sensors and are generally available for purchase and rental. The Arri camera used in our test was supplied by **Arri Australia**; the Panavision DXL2 was provided by **Panavision Brisbane**; **Sony Australia** supplied the Sony; and the RED Monstro was provided by **Lemac**, a rental company in Brisbane. I would like to thank all the vendors

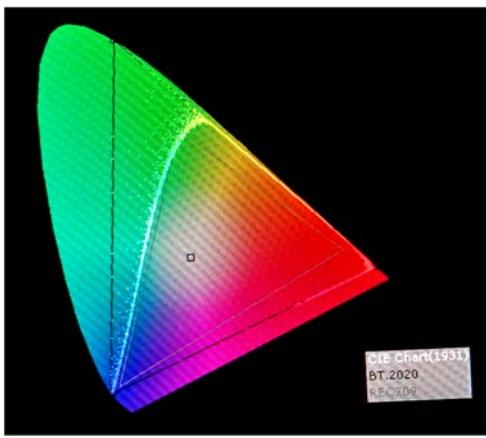


Figure 4: Panavision DXL2

for their generous support. This test wouldn't have been possible without them. As much as possible, I reached out to all the vendors seeking guidance and offering feedback from the tests.

The Results

We used each vendor's native software to process and output the images, which resulted in the best results in all cases. With three of the four cameras we were able to output the results to an external monitor. The cameras were set to output Rec. 2020 color space and the images were displayed on a calibrated Flanders Scientific DM-170 monitor with Rec. 2020 color space selected. The display was set up to show CIE 1931 chromaticity diagrams. In case of the Arri camera, we used Davinci Resolve and applied the Rec. 2020 transform node (not a look-up table) to output to an external monitor.

None of the cameras tested covered the entire Rec. 2020, but that was expected, as it is the widest gamut they could theoreti-

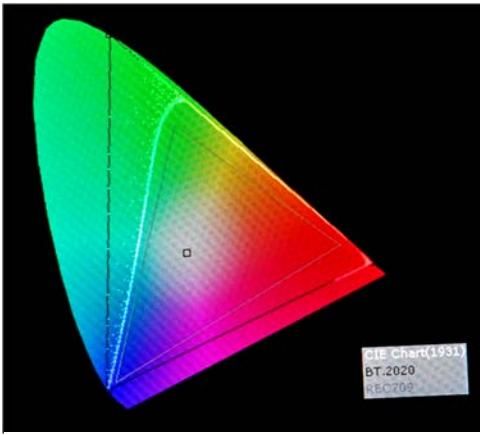


Figure 5: RED Monstro

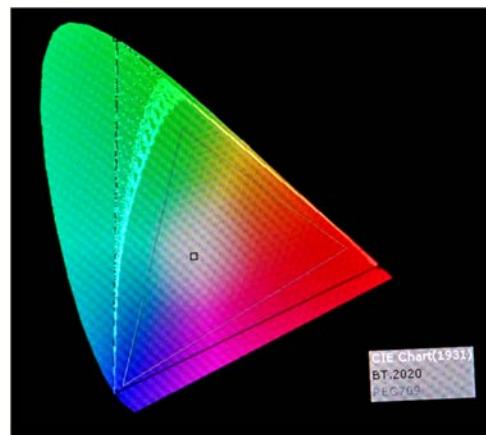


Figure 6: Sony Venice



The test setup: a Jarrel-Ash Monochromator-Spectrograph and tungsten fiber optic illuminator.

cally cover. This table shows which gamuts each camera reproduced accurately.

Camera	Rec.709	DCI-P3	Rec.2020
Arri Alexa LF	YES	NO	NO
RED Monstro	YES	NO	NO
Panavision DXL2	NO	NO	NO
Sony Venice	YES	YES	NO

Figures 4–7 on the opposite page depict the performance of each camera. The Rec. 709 standard is shown as a gray triangle, and the Rec. 2020 is the larger black trian-

gle. (DCI-P3 is not shown.) The bright trace shows the camera's response.

You can see that the Arri Alexa covers the entire Rec. 709 gamut, as do the RED Monstro and the Sony Venice, but the Sony goes beyond and also encompasses the DCI-P3. The Panavision DXL2 does not completely enclose the Rec. 709 gamut, failing to hit the green primary. The RED and Panavision cameras have unexpected and significant color shifts (as revealed in vectorscope images that are not included here), essentially reproducing reds as magentas.

In addition to covering the Rec. 709 and DCI-P3 color gamuts, the Sony camera has very high accuracy and no obvious color shifts. The reproduction of saturated blues and reds is almost perfect. The greens do not extend to the fully saturated Rec. 2020 primary, but the Venice has the best green color reproduction that we have seen from any camera.

As was pointed out in the 8K Digital Camera Comparison at the GSCA confer-

ence in September 2018, the differences in these cameras' performance does not necessarily mean that some are better than others. Color response is simply another characteristic that cinematographers and producers must weigh, along with resolution, aspect ratio, size, weight, etc., when choosing a camera for a given application. For some shoots color accuracy may not be as important as one of these other factors; or a certain way of capturing colors, even if not perfectly accurate, may be aesthetically more desirable.

It is my hope that these results will help GS filmmakers choose the tools best suited to their needs. I welcome any questions or comments about the test methodology and results.

Pawel Achtel has been involved in underwater cinematography for almost 30 years and 3D cinematography for giant-screen cinema for almost ten. He is a member of the Australian Cinematographers Society and an award-winning inventor and manufacturer of underwater cinematography equipment through his company Achtel Pty. Ltd. He can be contacted at pawel.achtel@24x7.com.au

(from FILMS on page 8)

Asteroid Impact

Produced and distributed by Imax Corporation. Directed by **W.D. Hogan**, produced by **Jini Durr** and **Phil Groves**, photographed by **Sean MacLeod Phillips**, and written by **Phil Groves**. Executive producers: **Anna Chi** and **Phil Groves**. Cast: **Len J. Phillips**, **Steve Tsang**, and **Bernadette Janssen**. Release: Fall.

"Asteroid Impact will reveal the origins of asteroids and the effects of previous Earth impacts. Delve into how these celestial bodies have shaped life on primitive Earth and the threat they pose to our planet today. Learn how we monitor them in order to stay out of their deadly path. Through the eyes of scientists tasked with keeping watch over our planet, see the devastating effects of a hypothetical asteroid impact portrayed on a grand scale as never seen before. The ways we might prevent a cosmic collision are also explored. This new IMAX documentary will

make clear it's not a question of *if* an asteroid will strike our planet again, but *when*.

Back From the Brink

Produced by **Sean Casey Productions** and distributed by **Cosmic Picture**. Directed and photographed by **Sean Casey**, produced by **Jen Casey** and **Sean Casey**, and written by **Mose Richards**. Release: Fall.

"Back from the Brink, from award-winning giant screen director **Sean Casey**, is an immersive film that will explore extraordinary true stories of animals rescued from the brink of extinction. Audiences will meet California's endearing Channel Island fox, the smallest canid in the world, imperiled by the introduction of golden eagles to their only habitat. We will witness the stunning migration of the Christmas Island red

crabs, thinned dangerously by the crazy ant invasion. And, finally, we journey to Yunnan, China, to find the enigmatic golden monkey, high on the most-endangered primates list, living in one of the most biodiverse and remote regions of the world. *Back from the Brink*, with real and inspiring conservation stories, will renew your hope that our threatened planet and all its inhabitants can be saved."



Back from the Brink

Bookings: January 2019 by Film

544 bookings of 87 films in 147 theaters

These listings do not include Hollywood films shown in multiplex IMAX theaters. Those films are listed when they are shown in non-multiplex theaters, and conversely, non-Hollywood giant-screen films showing on multiplex IMAX screens are also listed.

Listings shown in **bold face** below are new or updated listings. The rest are unchanged from the previous

month's issue.

The data on the following pages are **not** warranted to be comprehensive or accurate in every detail, despite our best efforts to make them so. They have been compiled from theater surveys, distributors, the Web, and other sources.

We will make every effort to improve the thorough-

ness, and accuracy of these data. If your theater or film is not shown here, please get in touch with us to update our listings.

Where a date is not shown, it means that no date was provided by the source or, in the case of a closing date, that no date has been set, or that the run is indefinite.

The key to film abbreviations is on page 17.

Film	Theater	Open	Close	Film	Theater	Open	Close	Film	Theater	Open	Close
AfricAdv	Corpus Christi Lex	6/17/16		ConqOTS	Edmonton TWS	6/30/18		G3DNW	Hastings	3/17/13	6/30/19
	Pensacola NAM	5/26/17	6/30/19		San Diego RHF	7/11/14	6/30/19		Lehi	1/19/19	1/19/20
	Toronto OP	6/1/18	6/1/19		Austin TSHM	3/1/18	2/28/19		Louisville KSC	9/30/12	6/30/19
	Washington NASM	5/26/17	5/25/19		Fort Worth	6/10/17	9/30/19		Peoria RM	4/1/16	6/30/19
	Katowice CC	9/30/19			Toronto OSC	2/24/18			Portland OMSI ET	1/7/14	6/30/19
	Wroclaw CC	9/30/19			Columbus COSI	3/9/18	3/9/19		Raleigh	10/1/17	10/30/19
	Lodz CC	9/30/19			Columbus GA NIM	1/31/18	1/31/19		Richmond SMV	5/1/13	6/30/19
	Poznan CC	9/30/19			Dearborn THF	2/27/17	2/28/19		Sacramento Imx	8/13/13	5/31/19
	Warsaw CC	9/30/19			Gatineau	9/1/15	3/31/19		Saint Augustine	1/18/13	6/30/19
	Wroclaw CC	9/30/19			Hampton VASC	10/17/18	10/17/19		San Diego RHF	10/12/12	6/30/19
AirRacer	Hutchinson	1/19/18	1/31/19		Hutchinson	1/23/17	1/31/20		Tallahassee CLC	1/18/13	6/30/19
	Shijiazhuang HST	1/1/17	1/1/19		Raleigh	5/23/14	2/1/19		Victoria DCI	4/5/13	6/30/19
	Austin TSHM	9/1/18	8/15/19		Seattle PSC 2	3/29/14	6/30/19		Edmonton TWS	10/22/18	1/24/19
	Beijing 3D CSTM	2/6/18	2/15/19		Washington NASM	5/23/17	5/22/19		Hastings	2/10/15	6/10/19
	Charlotte DP	5/21/17	6/30/19		Fort Worth	7/15/16	9/30/19		Orlando SC	7/5/14	1/4/19
	Chicago MSI	5/26/17	6/30/19		Houston MNS	7/17/17	6/30/19		Prague CC	5/22/14	5/21/19
	Edmonton	1/6/18	6/30/19		Kansas City Sci	7/23/13	7/23/19		Salt Lake City	11/16/18	12/31/19
	Columbus COSI	1/10/18	6/30/19		Portland OMSI ET	1/26/18	1/31/19		Atlanta FMNH	12/15/18	12/31/19
	Daging STM	2/16/18	2/15/19		Syracuse MOST	10/5/18	1/31/19		Atlantic City	7/1/18	3/1/19
	Dearborn THF	3/2/18	2/28/19		Fort Worth	5/28/16	9/30/19		Boston MOS	7/5/18	7/4/19
AMJ	Edmonton TWS	1/19/18	6/30/19		Gatineau	7/9/18	3/20/20		Cleveland	8/1/18	6/30/19
	Erie	6/30/18	6/30/19		Austin TSHM	10/1/17	9/1/19		Edmonton TWS	7/1/18	10/4/19
	Gatineau	12/16/17	3/2/19		Baltimore MSC	2/17/17	6/30/19		Harrisburg	7/6/18	7/5/19
	Guayaquil	4/16/18	2/28/19		Birmingham AL	2/17/17	2/28/19		Jersey City	11/23/18	12/22/19
	Hampton VASC	3/31/18	3/30/19		Bradford	1/1/18	12/31/19		Saint Augustine	8/20/18	8/19/20
	Houston MNS	4/21/17	12/21/19		Chantilly	2/17/17	2/16/20		Salt Lake City Clark	7/21/18	3/29/19
	Indianapolis Imx	9/8/17	6/7/19		Charlotte DP	8/26/17	12/31/19		Grand Canyon DCI	7/5/18	7/5/19
	Joint SCK	6/1/18	12/20/19		Edmonton TWS	3/17/18	2/1/19		Grand Rapids Cel	11/1/19	12/19/19
	Melbourne MV	9/15/17	9/13/19		Fort Lauderdale	3/25/15	2/28/19		Portage Cel	9/1/18	7/31/19
	Orlando SC	2/24/18	2/23/19		Fort Worth	2/17/17	6/30/19		Richmond SMV	6/1/16	7/31/19
AMJ	Peoria RM	6/20/18	1/19/19		Garden City	12/1/17	12/31/19		Portland OMSI ET	2/16/18	1/31/19
	Phoenix ASC	8/16/18	2/15/19		Grand Rapids Cel	7/15/17	7/31/19		Portland OMSI ET	2/17/18	1/31/20
	Pittsburgh CSC	11/17/17	6/30/19		Guayaquil	4/16/18	4/15/19		San Jose Tech	10/31/18	1/31/20
	Portland OMSI ET	2/6/18	2/15/19		Hampton VASC	2/17/17	2/17/19		HCTBD	8/17/96	
	Regina	2/16/18	2/15/19		Harrisburg	2/18/17	2/18/19		HidUniv	9/7/18	12/31/19
	Richmond SMV	5/1/18	4/30/19		Hastings	10/19/17	10/1/19		Greece	7/1/18	1/14/19
	Sacramento Imx	9/8/17	6/30/19		Houston MNS	2/17/17	12/31/19		GlobSoun	11/1/17	
	Seattle PSC 2	11/10/17	11/10/19		Jersey City	2/17/17	12/31/19		GCA	15/1/18	
	Shanghai 3D STM	8/1/18	8/1/19		London SM	9/4/17	8/31/19		GC	5/31/18	
	St. Catharines	12/2/17	6/30/19		Lubbock SS	2/2/18	2/1/19		GWS	6/3/18	
AMJ	Tallahassee CLC	4/28/17	6/30/19		Memphis Pink	2/10/18	3/2/19		HumbpWha	8/17/96	
	Vancouver TWS	12/22/17	6/30/19		Monterey Pap	2/2/18	2/1/19		Humber	9/7/18	
	Victoria DCI	4/14/17	6/30/19		Moscow Kin	9/10/17	6/1/19		Hurrican	9/24/15	
	Albuquerque NMNMH	7/16/18	7/15/19		Mount Pleasant Cel	7/15/17	7/31/19		Indyplex Imx	9/1/18	
	Chandigarh	6/15/18	6/14/20		Muskegon Cel	7/15/17	7/31/19		Keeling NMMST	12/1/18	
	Chattanooga TA	6/22/18	6/21/19		Philadelphia FI	3/1/18	2/28/19		Leon Et	1/1/19	
	Cleveland	3/23/18	3/22/19		Pittsburgh CSC	11/17/17	12/31/19		Milwaukee	2/1/18	
	Columbus COSI	5/25/18	5/24/19		Portage Cel	2/17/17	3/1/19		Richmond	3/14/15	
	Dearborn THF	2/16/18	2/15/19		Regina	2/17/17	12/31/19		Sacramento Imx	8/19/16	
	Denver MNS	2/16/18	2/15/19		San Diego RHF	3/10/17	4/1/19		Sudbury	9/24/15	
AMMM	Edmonton	2/16/18	2/15/19		San Jose Tech	2/17/17	11/1/19		Vancouver TWS	10/9/15	
	Galveston	3/1/18	2/18/19		Seattle PSC 2	2/17/17	6/30/19		Hampton VASC	6/15/17	
	Hague	7/3/18	7/2/19		Singapore DC	10/1/18	4/1/19		Indianapolis Imx	8/16/16	
	Hampton VASC	10/1/18	9/30/19		Sioux Falls	6/2/17	6/30/19		Indyplex Imx	8/16/16	
	Hastings	6/2/18	6/20/19		Stockholm	3/15/18	3/15/19		Levi Et	1/1/19	
	Indianapolis Imx	6/8/18	6/7/19		Sudbury	2/17/17	6/30/19		Portage Cel	2/1/18	
	Lubbock SS	7/6/18	7/6/19		Thessaloniki	10/28/17	10/2/19		Richmond SMV	3/14/15	
	Lucerne	9/1/18	9/1/19		Taipei S	4/16/18	6/30/19		Sacramento Imx	8/19/16	
	Memphis Pink	8/1/18	8/10/19		Victoria DCI	3/17/17	12/31/19		Sudbury	9/24/15	
	Mexicali	9/22/18	3/21/19		Washington NASM	2/17/17	2/16/20		Vancouver TWS	12/11/19	
AMMM	Montreal City Pap	3/15/18	3/14/19	DSC	Davenport Put	2/6/15	3/9/19		Hampton VASC	6/14/17	
	Moscow Kin	5/18/18	5/17/19		Dearborn THF	3/25/16	1/31/19		Indyplex Imx	2/9/18	
	Paris Geo	3/7/18	3/6/19		Edmonton TWS	9/14/18	9/23/19		Lehi	1/1/19	
	Peoria RM	2/16/18	2/15/19		McMinnville	6/16/16			London TWS	1/1/19	
	Raleigh	9/1/18	8/31/19		Davenport Put	10/15/16	10/14/19		Montreal	1/1/19	
	Regina	5/11/18	5/12/19		Edmonton TWS	6/2/18	6/1/19		Orlando SC	1/1/19	
	Saint Augustin	6/1/18	5/30/19		Garza Garcia	4/1/18	3/31/19		Portland OMSI ET	4/26/18	
	San Jose Tech	2/17/18	2/16/19		Huntsville USRSC	4/1/18	4/30/19		Portland OMSI ET	4/26/18	
	Seattle PSC 2	9/7/18	9/6/19		Kansas City Sci	4/1/17	3/30/19		Portland OMSI ET	4/26/18	
	Tallahassee CLC	2/16/18	2/15/19		Kuwait SC	10/1/18	2/28/19		Portland OMSI ET	4/26/18	
AMMM	Portland OMSI ET	1/26/18	1/31/19		Chandigarh	6/15/18	6/14/20		Portland OMSI ET	4/26/18	
	Saint Felician	4/1/18	1/30/19		Garneau	7/30/18	3/20/20		Portland OMSI ET	4/26/18	
	Gatineau	4/24/18	3/30/20		Calgary TS	9/1/17	9/1/20		Portland OMSI ET	4/26/18	
	Atlanta FMNH	1/11/18	1/10/19		Davenport Put	10/15/16	10/14/19		Portland OMSI ET	4/26/18	
	Stockholm	10/1/17			Edmonton TWS	6/2/17	6/1/19		Portland OMSI ET	4/26/18	
	Galveston	11/17/18	11/30/19		Garza Garcia	3/1/18	6/30/19		Portland OMSI ET	4/26/18	
	Portland OMSI ET	1/26/18	1/31/19		Huntsville USSRC	4/1/18	4/1/19		Portland OMSI ET	4/26/18	
	Regina	5/19/18	5/18/19		Kansas City Sci	10/15/16	10/14/19		Portland OMSI ET	4/26/18	
	Chennaioga TA	3/16/18	3/15/19		Memphis Pink	11/1/17	4/30/19		Portland OMSI ET	4/26/18	
	Erie	8/4/18	6/30/19		Philippines	2/1/17	2/1/19		Portland OMSI ET	4/26/18	
AMMM	Fort Lauderdale	6/1/18	5/31/19		Sacramento Imx	2/24/17			Portland OMSI ET	4/26/18	
	Fort Worth	11/2/18	5/30/19		Saint Augustine	10/15/16	10/14/19		Portland OMSI ET	4/26/18	
	Galveston	8/2/18	2/28/19		Tallahassee CLC	5/19/17	5/1/20		Portland OMSI ET	4/26/18	
	Garden City	9/25/18	9/24/19		Tijuana	7/28/17	6/1/19		Portland OMSI ET	4/26/18	
	Gatineau	6/1/18	5/31/19		Chandigarh	12/10/04			Portland OMSI ET	4/26/18	
	Jersey City	8/4/18	8/3/19		Corpus Christi Lex	5/12/12			Portland OMSI ET	4/26/18	
	Lehi	5/24/18	5/24/19		Dayton	3/1/13			Portland OMSI ET	4/26/18	
	Louisville KSC	3/23/18	3/22/19		Huntsville USSRC	7/1/13			Portland OMSI ET	4/26/18	
	Lubbock SS	11/9/18	5/20/19		McMinnville	3/23/12			Portland OMSI ET	4/26/18	
	New York AMNH	9/14/18	3/13/19		Charlotte DP	5/26/18	12/31/19		Portland OMSI ET	4/26/18	
AMMM	Omaha Zoo	11/1/18	4/30/19		Edmonton TWS	7/17/17	7/30/19		Portland OMSI ET	4/26/18	
	Orlando SC	11/1/18	10/31/19		Davenport Put	3/27/14	6/1/20		Portland OMSI ET	4/26/18	
	Pittsburgh CSC	8/31/18	6/30/19		Edmonton TWS	14/16	1/1/19		Portland OMSI ET	4/26/18	
	Portland OMSI ET	9/7/18	9/6/19		Kenner	6/4/16	6/3/20		Portland OMSI ET	4/26/18	
	Raleigh	6/4/18	6/3/19		Killeen	9/15/17	9/15/20		Portland OMSI ET	4/26/18	
	San Diego NHM	8/1/18	2/28/19		Portland OMSI ET	5/22/14	4/9/19		Portland OMSI ET	4/26/18	
	Sudbury	9/4/18	6/30/19		Leon Exp	1/2/19	4/30/19		Portland OMSI ET	4/26/18	
	Tallahassee CLC	10/18/18	10/18/19		Hague	10/4/12	10/3/20		Portland OMSI ET	4/26/18	
	Virginia Beach AMSC	6/20/18	12/1/19		Louisville KSC	6/18/15	7/2/20		Portland OMSI ET	4/26/18	
	Columbus COSI	9/15/18	6/30/19		Atlanta FMNH	11/2/18	5/2/19		Portland OMSI ET	4/26/18	
Bugs	Davenport Put	10/1/12	4/28/20		Columbus COSI	9/1/14	6/30/19</				

Film	Theater	Open	Close	Film	Theater	Open	Close	Film	Theater	Open	Close
MOC	Melbourne MV	1/30/17	1/28/19	TTA	Lucerne	6/1/18	6/30/19	TurtOdys	Phoenix ASC	12/1/18	12/31/19
	Alamogordo	3/31/18	3/31/19		Melbourne MV	3/21/18	3/31/19		San Diego NHM	1/3/18	3/31/19
	Columbus COSI	4/1/17	3/31/19		Milwaukee	6/14/18	6/30/19		Glasgow	4/1/15	4/10/19
	Gatineau	1/10/18	1/31/19		Montreal SC	6/1/18	6/30/19		Grand Rapids Cel	6/2/18	7/31/19
	Sioux Falls	1/25/18	1/31/19		New Orleans	3/30/18	3/31/19		Moscow Kin	11/1/16	12/1/19
	Sudbury	9/7/17	10/31/19		Omaha Zoo	3/30/18	10/31/19		Portage Cel	6/1/18	7/31/19
	Portland OMSI ET	10/6/18	1/27/19		Orlando SC	4/16/18	4/30/19		Apple Valley Imx	11/9/18	5/8/19
	Bradford	4/12/14	8/30/19		Peoria RM	9/28/18	9/30/19		Beijing 3D CSTM	1/1/19	12/31/19
	Chongzhen TBP	6/1/14	9/19/19		Phoenix F1	5/1/18	5/1/19		Hastings	7/3/19	5/30/19
	Davenport Put	2/1/14	1/31/19		Phoenix ASC	5/4/18	5/31/19		Lehi	7/3/19	1/1/19
MOE	Dubai Vox	2/1/17	3/30/19		Portland OMSI ET	4/20/18	4/30/19		Melbourne MV	1/19/19	12/31/19
	Mumbai Ino	1/1/18	12/31/19		Richmond SMV	6/1/18	6/30/19		Port of Spain	9/27/18	9/26/19
	Potiers Imax 3D	2/1/16	1/31/19		San Diego RHF	3/1/18	3/31/19		Sacramento Imx	9/21/18	3/20/19
	Tallahassee CLC	3/17	3/20		Seattle PSC 2	4/20/11	4/30/19		Seattle PSC 2	12/7/18	5/31/19
	Milwaukee	10/1/18	9/30/19		Tijuana	4/1/18	4/30/19		Sioux Falls	9/1/18	1/31/19
	Baton Rouge LASM	3/1/17	3/31/19		Toronto OSC	6/15/18	6/30/19		Sudbury	12/7/18	12/26/19
	Melbourne MV	9/22/17	9/30/19		Victoria DCI	7/1/18	7/31/19		Virginia Beach AMSC	6/30/19	12/31/19
	Peoria RM	10/16/18	10/31/20		Seattle City Clark	5/19/18	3/30/19		Al Khorab	11/1/18	1/31/19
	Portland OMSI ET	1/20/18	3/31/19		Minneapolis	10/23/17	6/20/19		Katowice CC	9/30/19	9/30/19
	Sacramento Imx	1/1/17	6/30/19		Walt Disney SCK	12/10/18	2/28/19		Kremlin CC	9/20/19	9/30/19
MounQues Mummies	Vancouver TWS	7/1/17	6/30/19		Valencia Spn	1/7/19	6/30/20		Lotz CC	9/30/19	9/30/19
	Niagara Can DCI	7/1/86			Dubai Vox	2/1/17	1/30/19		Poznan CC	9/30/19	9/30/19
	Niagara NY DCI	5/1/07			Louisville KSC	7/4/14	7/20/20		Warsaw CC	9/30/19	9/30/19
	Albuquerque NMNMH	4/2/18	4/1/19		Columbus COSI	7/1/17	6/30/19		Wroclaw CC	9/30/19	9/30/19
	Baltimore MSC	7/1/18	6/30/19		Dearborn THF	3/25/16	1/31/19		Gatineau	7/30/18	3/30/20
	Carnival Horizon	4/1/18	10/5/19		Benton VAS	6/20/15	6/19/19		Philadelphia F1	10/13/18	10/1/19
	Columbus COSI	3/8/18	3/8/19		Hutchinson	5/2/18	6/12/19		Albuquerque NMNMH	10/15/18	10/14/19
	Edmonton TWS	2/1/16	10/19/19		Montgomery	1/18/15	5/30/19		Cincinnati MC	12/21/18	
	Fort Worth	2/12/16	5/31/19		Mumbai Ino	1/1/18	1/1/19		Davenport Put	1/2/18	11/8/19
	Grand Canyon DCI	3/16/18	3/8/19		Portland OMSI ET	3/15/18	3/17/19		Dubai MNS	1/24/19	1/23/20
NPA	Grand Rapids Cel	10/1/18	7/31/19		Regina	9/1/18	9/1/19		Edmonton MNS	10/12/18	10/11/19
	Hampton VASC	4/29/16	4/29/19		Virginia Beach AMSC	10/26/18	10/28/19		Houston MNS	11/9/18	
	Harrisburg	7/1/16	7/1/19		Dubai Vox	2/1/17	1/30/19		Kagoshima	12/18	12/19
	Hastings	6/9/16	7/1/19		Portland OMSI ET	1/15/14	4/28/19		Lehi	10/13/18	10/12/19
	Hong Kong SM	9/8/18	2/28/19		Copenhagen TBP	2/9/17	2/9/19		Los Angeles CSC	1/16/19	7/15/19
	Houston MNS	7/1/18	12/31/19		Pan Pacific Geo	1/30/18	1/29/19		Portland OMSI ET	10/13/18	10/12/19
	Jersey City	2/12/18	6/24/19		Salt Lake City Clark	2/16/18	2/15/19		Salt Lake City Clark	1/16/19	2/15/20
	Lansing Cel	10/1/18	7/31/19		Victoria DCI	9/22/17	12/31/19		Seattle PSC 2	1/4/19	5/31/19
	London BFI Ode	2/12/16	7/1/18		Chicago MSI	5/25/18	5/25/19		Vancouver TWS	11/17/18	9/30/19
	Magical	4/2/18	4/29/19		Memphis Pink	11/17/18	5/22/20		New Orleans	6/30/19	6/30/19
OOBP	Mobile	5/26/18	5/25/19		Pearla RM	6/30/18	6/30/20		Apple Valley Imx	2/1/16	9/30/19
	Moscow Kin	9/1/17	12/1/19		Pittsburgh CSC	11/15/17	11/30/19		Charlotte DP	9/19/18	9/30/19
	Portland OMSI ET	2/12/16	12/31/19		Port Davenport	1/26/18	1/31/19		Dubai Vox	9/22/17	9/30/19
	Richmond SMV	4/10/16	4/30/19		Portland OMSI ET	2/5/16	6/30/19		Edmonton MNS	10/12/18	10/11/19
	Saint Louis SC	2/12/16	3/31/19		Port Davenport	2/1/18	1/30/19		Houston MNS	6/1/16	6/30/19
	San Diego NHM	12/1/18	8/31/19		Portland OMSI ET	1/23/18	1/23/19		Las Palmas	7/15/18	7/31/19
	San Jose Tech	2/12/16	11/1/19		Port Davenport	1/26/18	1/31/19		Lucerne	9/2/17	9/30/19
	Sudbury	2/1/16	6/30/19		Portland OMSI ET	1/26/18	1/31/19		Melbourne MV	9/2/17	9/30/19
	Valencia Spn	10/7/16	6/30/19		Portland OMSI ET	1/26/18	1/31/19		Peoria RM	9/30/18	6/30/19
	Vancouver TWS	2/12/18	6/30/19		Portland OMSI ET	1/26/18	1/31/19		Phoenix ASC	3/2/18	3/31/19
OOBP	Yellowstone	5/1/16	2/11/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Al Khorab	8/15/18	8/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Atlanta FMNH	8/3/18	8/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Birmingham AL	9/30/18	9/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Boston NEA	3/20/18	3/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Charlotte DP	6/1/18	6/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Chattanoogaoga	3/1/18	3/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Chicago MSI	3/16/18	3/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Colombia POSI	9/23/18	9/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Davenport Put	3/16/18	3/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
TA	Denver MNS	9/1/18	9/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Galveston	5/1/18	5/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Hague	7/13/18	7/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Houston MNS	3/30/18	3/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Jersey City	6/25/18	6/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Kuwait SCK	8/20/18	5/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Lehi	3/16/18	3/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	London BFI Ode	9/7/18	6/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Louisville KSC	8/15/18	6/15/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Lubbock SS	5/1/18	5/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
TinyGian	Vancouver TWS	2/12/18	6/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Yellowstone	5/1/16	2/11/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Al Khorab	8/15/18	8/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Atlanta FMNH	8/3/18	8/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Birmingham AL	9/30/18	9/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Boston NEA	9/1/18	8/15/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	ConQOTS	3/18/18	2/28/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	DreamBig	10/1/17	9/1/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	HumpbWha	7/1/15	7/12/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	NPA	6/30/19			Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
TLR	Baton Rouge LASM	3/1/17	3/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	Beijing 3D CSTM	12/15/18	12/14/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	IncrPred	9/30/17	12/31/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	MA	2/9/18	2/8/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	OBOP	8/18/18	8/30/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	GBR3D	7/16/18	3/1/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19
	JCR3D	2/12/18	2/12/19		Port Davenport	1/26/18	1/31/19		Portland OMSI ET	1/26/18	1/31/19

Theater	Film	Open	Close	Theater	Film	Open	Close	Theater	Film	Open	Close		
Fort Worth	AMJ	2/16/18	2/15/19		FOTB	9/30/12	6/30/19		Richmond SMV	AmazAdv	5/1/18	4/30/19	
	BackWild	11/2/18	5/30/19		LastReef	2/8/14	6/30/19			FOTB	5/1/13	6/30/19	
	CRW	9/1/17	9/30/19		OOBP	8/1/13	6/15/19			G	6/1/15	7/31/19	
	DinoAliv	7/15/16	9/30/19		PTJH	7/4/14	7/20/20			HumpbWha	3/14/16	7/31/19	
	Dolphins	5/28/16	9/30/19		TA	2/1/16	7/31/19			NPA	4/10/16	4/30/19	
	DreamBig	2/17/17	6/30/19		TinyGian	9/21/17	9/30/19			OOBP	6/1/18	6/30/19	
	NPA	2/12/16	5/31/19		TOTIA	6/30/18	7/31/19			WildAfri	2/1/17		
	TA	3/1/17	9/30/19		AMJ	7/6/18	7/6/19			AmazAdv	9/8/17	6/30/19	
Galveston	AMJ	3/1/18	2/18/19		BackWild	11/9/18	5/30/19			ExtrWeat	2/24/17		
	AOTE	11/17/18	11/30/19		DreamBig	2/2/18	2/1/19			FOTB	8/13/13	5/31/19	
	BackWild	8/21/18	2/28/19		OOBP	5/1/18	5/31/19			GWS	2/20/15	6/30/19	
	Jerusele	11/12/15	4/22/19		McMinnville	9/21/17	9/30/19			HumpbWha	8/19/16	10/24/19	
	OOBP	5/1/18	5/31/19		AMJ	9/1/18	9/1/19			Jerusele	9/15/14	10/31/19	
Garden City	WOTA	11/17/18	11/30/19		OOBP	8/1/18	6/30/19			Lucmies	5/20/6	6/30/19	
	AsterME	5/19/17	6/18/20		DSC	6/16/16				L&C	1/1/17		
	BackWild	9/25/18	9/24/19		FightPIL	3/23/12				AOTE	4/1/18	6/14/19	
	DreamBig	12/1/17	12/31/19		LITAOA	4/10/15	5/30/19			WOTA	4/1/18	11/30/19	
Garza Garcia	ExtrWeat	3/1/18	6/30/19		LOF	3/23/12				NPA	2/12/16	3/31/19	
	JMCSO	11/1/18	2/28/19		RobotsNG	11/6/15	5/30/19			Saint Louis SC	10/1/18	3/10/19	
Gatineau	AmazAdv	12/16/17	3/2/19		AmazAdv	9/15/17	9/13/19			Saint Paul SMM	10/1/18	10/31/19	
	Arabia	4/24/18	3/30/20		AMMM	7/11/16				Salt Lake City Clark	7/21/18	3/29/19	
	BackWild	6/1/18	5/31/19		MA	1/30/17	1/28/19			Pandas	5/19/18	3/29/19	
	D-Day	9/1/15	3/31/19		Mummies	9/22/17	9/30/19			SFLIS	2/16/18	2/15/19	
	Dolphins	7/9/18	3/20/19		OOBP	3/21/18	3/21/19			SOE	11/10/18	11/9/19	
	Everest	7/30/18	3/30/20		TinyGian	9/22/17	9/30/19			Volcanoes	1/16/19	2/15/20	
	FOTB	10/5/12	6/30/19		TOTIA	9/22/17	9/30/19			BackWild	8/1/18	2/28/19	
	GWS	10/7/16	3/31/20		TurOdy	1/19/18	12/31/19			NPA	12/1/18	8/31/19	
	MOC	1/10/18	1/31/19		WildAfri	1/4/18	1/31/19			TOTIA	1/13/18	3/31/19	
	TinyGian	12/23/16	3/21/19		WWDP3D	9/22/17	9/30/19			Bugs	7/1/14	6/30/19	
	VanGogh	7/30/18	3/30/20		Memphis Pink	AMJ	8/11/18	8/10/19			DreamBig	3/10/17	4/1/19
Glasgow	TTA	4/1/15	4/10/19		DreamBig	2/10/18	3/2/19			FOTB	10/12/12	6/30/19	
Grand Canyon DCI	GC	11/1/99	12/19		ExtrWeat	3/24/17	8/31/19			GBR3D	7/5/18	7/5/19	
Grand Rapids Cel	3/16/18	3/8/19		JTSP	5/26/18	5/25/19			OOBP	3/1/18	3/31/19		
	DreamBig	7/15/17	7/21/19		TinyGian	11/17/18	5/22/20			WOTA	12/7/18	12/31/19	
	GCA	9/1/13	7/31/19		AMMM	9/22/17	3/21/19			NPA	12/1/18	11/1/19	
	HumpbWha	9/1/18	7/31/19		NPA	4/22/18	4/23/19			Mount Pleasant Cel	9/17/16	12/1/19	
	NPA	10/1/18	7/31/19		AMJ	5/15/18	5/14/19			DreamBig	2/17/17	2/17/18	
Guayaquil	TTA	6/2/18	7/31/19		OOBP	6/14/18	6/30/19			OOBP	3/1/18	3/31/19	
Hague	AmazAdv	4/16/18	2/28/19		Penguins	10/23/17	6/20/19			WOTA	12/7/18	12/31/19	
	DreamBig	4/16/18	4/15/19		TOTIA	6/14/18	6/30/19			NPA	12/1/18	11/1/19	
	AMJ	7/3/18	7/2/19		Mobile	5/26/18	5/25/19			Mount Pleasant Cel	11/1/16	12/1/19	
	FON	10/4/12	10/3/20		Monterrey Pap	AMJ	5/18/18	5/17/19			Mumbai Ino	1/1/18	12/31/19
	GWS	4/1/18	4/30/19		OOBP	6/1/18	6/30/19			RobotsNG	1/1/18	1/1/19	
	JTM	5/10/18	6/30/19		AmazAdv	4/15/18	4/14/19			AmazAdv	9/10/17	6/1/19	
	OOBP	7/13/18	7/31/19		AMJ	9/17/16	12/1/19			OOBP	9/17/16	12/1/19	
Hampton VASC	AmazAdv	3/31/18	3/30/19		DreamBig	9/10/17	6/1/19			AMJ	9/17/16	12/1/19	
	AMJ	10/1/18	9/30/19		OOBP	9/17/16	12/1/19			OOBP	1/1/18	12/31/19	
	D-Day	10/17/18	10/17/19		TTA	11/1/16	12/1/19			SpaceNex	6/1/18	6/1/19	
	DreamBig	2/17/17	2/17/19		DreamBig	7/15/17	7/31/19			AmazAdv	12/2/17	12/31/19	
	HidUniv	9/7/18	12/31/19		MOTUW	1/1/18	12/31/19			SpaceNex	6/1/18	6/1/19	
	Hurican	6/15/17	6/14/19		RobotsNG	1/1/18	1/1/19			AmazAdv	12/2/17	12/31/19	
	JTS	2/21/15	2/20/19		DreamBig	7/15/17	7/31/19			WildOcea	7/1/18	6/30/19	
	NPA	4/29/16	4/29/19		OOBP	3/30/18	3/31/19			BackWild	11/1/18	12/31/19	
	RobotsNG	6/20/15	6/19/19		BackWild	11/1/18	4/30/19			NPA	1/2/16	6/30/19	
Harrisburg	DreamBig	2/18/16	2/18/19		EarthPil	4/1/18	4/30/19			Mount Pleasant Cel	11/1/16	12/1/19	
	FOTB	4/2/14	6/30/19		OOBP	7/5/18	1/4/19			Mumbai Ino	1/1/18	12/31/19	
	GBR3D	7/6/18	7/5/19		OOBP	4/16/18	4/30/19			RobotsNG	1/1/18	1/1/19	
	NPA	7/1/16	7/1/19		AMJ	3/7/18	3/6/19			AmazAdv	8/1/18	9/6/19	
	TinyGian	2/1/18	2/28/19		SFLIS	1/30/18	1/29/19			DreamBig	2/17/17	2/17/18	
Hastings	AMJ	6/2/18	6/20/19		Parker	7/29/18	7/21/19			OOBP	4/20/11	4/30/19	
	DreamBig	10/19/17	10/19/19		Pensacola NAM	4/26/17	6/30/19			SpaceNex	6/1/18	6/1/19	
	FOTB	3/17/13	6/30/19		Peoria RM	6/20/18	6/19/19			AmazAdv	12/1/18	12/31/19	
	G3DNW	2/10/15	6/10/19		AMJ	2/16/18	2/15/19			AmazAdv	8/1/18	8/1/19	
	NPA	6/9/16	7/1/19		FOTB	4/1/16	6/30/19			AmazAdv	9/17/18	10/1/19	
	TurOdy	9/13/18	5/30/19		Mummies	10/16/18	10/31/20			AmazAdv	11/1/17	11/1/18	
Hong Kong SM	NPA	9/8/18	2/28/19		OOBP	9/23/18	9/30/19			Alaska	1/1/17	1/1/19	
Houston MNS	SOE	1/1/19		TinyGian	6/30/18	6/30/19			DreamBig	10/1/18	10/31/19		
	AmazAdv	4/21/17	12/31/19		BackWild	8/31/18	6/30/19			OOBP	3/1/18	3/31/19	
	DinoAliv	7/1/17	6/30/19		DreamBig	11/1/18	12/31/19			WOTA	12/7/18	12/31/19	
	DreamBig	2/17/17	12/31/19		MOTUW	2/1/18	1/31/19			SpaceNex	6/1/18	6/1/19	
	NPA	7/1/18	12/31/19		RobotsNG	10/19/18	10/31/19			AmazAdv	12/2/17	12/31/19	
	OOBP	3/30/18	3/31/19		OOBP	5/4/18	5/31/19			AmazAdv	6/24/16	5/31/19	
Huntsville USSRC	WOTR3D	4/1/18	5/31/19		TOTIA	3/2/18	3/21/19			TurOdy	12/1/13	12/31/19	
	FightPil	7/1/13			WildAfri	9/27/18	9/28/19			Stockholm	12/1/13	12/31/19	
	ISR	5/5/18	4/30/19		DreamBig	4/1/18	4/30/19			Speyer Dome	10/1/17	10/1/19	
Hutchinson	SpaceNex	3/1/16	2/19/19		OOBP	5/1/18	5/1/19			Sudbury	10/1/17	10/1/19	
	AirRacer	1/19/18	1/31/19		Vikings	10/13/18	10/1/19			SpaceNex	12/7/18	12/31/19	
	D-Day	12/31/17	1/31/20		AmazAdv	8/16/18	2/15/19			TurOdy	12/6/19	12/31/19	
	GWS	7/1/17	12/31/19		IncrPred	10/19/18	10/31/19			SpaceNex	12/6/19	12/31/19	
	Kenya	5/30/15	6/30/19		OOBP	5/10/18	5/30/19			AmazAdv	12/2/17	12/31/19	
	LITA0A	5/1/15	7/1/19		RobotsNG	3/15/18	3/7/19			AmazAdv	12/2/17	12/31/19	
	RobotsNG	5/20/16	6/12/19		MOE	10/6/18	1/27/19			AmazAdv	12/2/17	12/31/19	
	SpaceNex	9/8/17	3/30/19		Mummies	1/26/18	3/31/19			AmazAdv	12/2/17	12/31/19	
	TOTIA	12/1/17	12/31/19		OOBP	2/12/16	3/1/19			AmazAdv	12/2/17	12/31/19	
Indianapolis Imx	AmazAdv	9/8/17	6/19/19		DreamBig	1/16/15	4/20/19			AmazAdv	12/2/17	12/31/19	
	HumpbWha	8/17/16	6/5/19		DSC	5/22/14	4/6/19			AmazAdv	12/2/17	12/31/19	
	Humrcan	2/9/18	2/8/19		FOTB	1/7/14	6/30/19			AmazAdv	12/2/17	12/31/19	
	JTS	8/31/18	8/30/19		GWS	1/26/14	1/31/19			AmazAdv	12/2/17	12/31/19	
Jersey City	BackWild	8/4/18	8/3/19		JMCSO	3/1/17	2/28/19			AmazAdv	12/2/17	12/31/19	
	DreamBig	2/17/17	12/31/19		TA	2/1/18	1/31/19			AmazAdv	12/2/17	12/31/19	
	GRB3D	11/23/18	11/22/19		Volcanoes	10/13/18	10/12/19			AmazAdv	12/2/17	12/31/19	
	Jerusele	9/1/18	8/31/20		TurOdy	7/27/18	7/28/19			AmazAdv	12/2/17	12/31/19	
	NPA	1/2/16	6/24/19		WildAfri	1/26/18	1/31/19			AmazAdv	12/2/17	12/31/19	
	OOBP	6/25/16	6/30/19		WWDP3D	1/26/18	1/31/19			AmazAdv	12/2/17	12/31/19	
Kagoshima	Vulcanos	1/2/18	1/2/19		AmazAdv	9/30/19				AmazAdv	12/2/17	12/31/19	
Kansas City Sci	DinoAliv	7/3/18	7/31/19		TurTale	9/30/19				AmazAdv	12/2/17	12/31/19	
	ExtrWeat	10/14/19			OOBP	9/1/18				AmazAdv	12/2/17	12/31/19	
Katowice CC	AfricAdv												

Key to Film Abbreviations

Film	Title	Year	Dist	Film	Title	Year	Dist	Film	Title	Year	Dist	
10Clover	10 Cloverfield Lane	2016	PPC	H&GWH	Hansel & Gretel: Witch Hunters	2013	3D	PPC	Rescue	Rescue 3D	2011	3D
12Strong	12 Strong	2018	WB	HappyFe2	Happy Feet Two	2011	3D	WB	ResTFC	Resident Evil: The Final Chapter	2017	3D
300RAE	300: Rise of an Empire	2014	3D	WB	Helboy	2019	LG	Revenant	Revenant, The	2016	FOX	
A11FS	Apollo 11: First Steps	2019	MFF	Hercules	Hercules	2014	3D	ppp	Riddick	Riddick	2013	UP
AAOU	Avengers: Age of Ultron, The	2015	3D	WDPD	HGCF	2013	LG	RideN	Rocky Mountain Express	2011	SLC	
ACGOTS	Aircraft Carrier: Guardian of the Seas	2016	3D	K2	HGM2	2015	3D	LG	ROA	Rock of Ages	2012	WB
AdAstra	Ad Astra	2019	FOX	HiddPac	Hidden Pacific	2019	3D	GSF	RoboCop	RoboCop	2014	COL
AfterEarth	After Earth	2013	SPE	HidUni	Hidden Universe	2013	3D	MFF	RobotsN	Robots	2015	3D
Aftershock	Aftershock	2010	HBMC	Hobbit	Hobbit: An Unexpected Journey, The	2012	3D	WB	RogueOne	Rogue One: A Star Wars Story	2016	3D
AGWN	Australia's Great Wild North	2018	K2	Hobbit2	Hobbit: The Desolation of Smaug	2013	3D	WB	ROTB	Room on the Broom	2015	3D
AirRacer	Air Racers 3D: Forces of Flight	2012	3D	WDPD	Hobbit3	2014	3D	WB	ROTLA	Raiders of the Lost Ark	2012	PFC
Aladdin	Aladdin	2016	3D	WDPD	Hobbit4	2015	3D	WB	RPA	Ready Player One	2018	3D
Aladdin18	Aladdin	2019	WDPD	HDPH2	Harry Potter and the Deathly Hallows, Part II	2011	3D	WB	SammyAdv	Sammy's Adventures: The Secret Passage	2010	nWP
AlienCov	Alien: Covenant	2017	FOX	HDPH3	Harry Potter and the Half-Blood Prince	2009	3D	WB	SanAndre	San Andreas	2015	3D
Alita	Alita: Battle Angel	2019	FOX	HHTY2	How to Train Your Dragon: The IMAX Experience	2010	3D	PPC	Sanctum	Sanctum	2011	3D
AMATW	Ant Man and the Wasp	2018	3D	WDPD	HHTY3	2019	UP	SeaReX	Sea Rex: Journey to a Prehistoric World	2010	3D	
AmazAdv	Amazon Adventure	2017	3D	SKF	Hubble3D	2010	3D	IMAX	SevenSon	Seven Son, The	2015	3D
AMJ	America's Musical Journey	2018	3D	MFF	HumpbWha	2015	3D	MFF	SFLIS	Search for Life In Space, The	2016	3D
AMMM	Amazing Mighty Micro Monsters 3D	2016	3D	nWP	HumpbGame	2012	LG	Shazam!	Shazam!	2019	WB	
AmSniper	American Sniper	2015	WB	Hurican	Hurricane	2017	3D	nWP	Shrek4	Shrek Forever After: An IMAX 3D Experience	2010	3D
AnCaves	Ancient Caves	2019	MFF	IAND	I Am Number Four	2011	3D	WDPD	Skyfall	Skyfall	2012	COL
Ankor	Angkor Wat: The Lost Empire of Cambodia	2019	3D	K2	IDR	2016	3D	FOX	Spider-Man: Homecoming	2017	3D	
AndMan	And Man	2016	3D	WDPD	Incipio	2013	3D	PPC	Spider-Man: Far From Home	2019	SONY	
AOFE	Antarctica 3D: On the Edge	2014	3D	GSF	Inception	2010	3D	WB	Spider-Man: Into the Spider-Verse	2018	SPE	
APE	Antarctic's Penguin Emperors 3D	2014	3D	K2	Incred2	2018	3D	WDPD	SOF	Story of Earth, The	2018	3D
Aquaman	Aquaman	2018	3D	WB	IncredP	2016	3D	GSF	Spectre	Spectre	2015	3D
Arabia	Arabia	2010	3D	MFF	Inferno	2016	3D	SPE	Secrets of Gravity, The	2017	B&D	
ArteFowl	Artemis Fowl	2019	WDPD	Inhumans	Inhumans	2017	IMAX	SoldStar	Soldiers' Stories	2014	KM	
ASM	Amazing Spider-Man, The	2012	3D	SPE	Interste	2014	PPC	Solo	Solo: A Star Wars Story	2018	3D	
ASM2	Amazing Spider-Man 2, The	2014	3D	SPE	ISOLM	2014	3D	SOTU	Secrets of the Universe	2019	K2	
AsterImp	Asteroid Impact	2019	3D	IMAX	IronMan2	2010	PPC	SpaceNex	Space Next 3D	2015	B&D	
AsterME	Asteroid: Mission Extreme	2016	3D	CPD	IronMan3	2013	3D	WDPD	SpaceJunk	SpaceJunk	2012	K2
ATTLG	Atlas Through the Looking Glass	2016	3D	WDPD	ISR	2016	3D	BDF	SuperPower Dogs	2019	3D	
AVATR	Avatar: The IMAX Experience	2009	3D	PPC	ITC	2019	WB	Super8	Super 8	2011	PPC	
AvatarSE	Avatar Special Edition: An IMAX 3D Experience	2010	3D	FOX	ITHTH	2015	WB	Star Trek	Star Trek: The IMAX Experience	2009	PFC	
Avengers	Marvel's The Avengers	2012	3D	WDPD	Jerusale	2013	3D	CPD	Star Trek Into Darkness	2013	3D	
Avengers4	Avengers: Endgame	2019	WDPD	JMCSD	Jean-Michel Cousteau's Secret Ocean	2015	3D	K2	Star Trek Beyond	2016	3D	
AvenglW	Avengers: Infinity War	2018	3D	WDPD	JohnCart	2012	3D	WDPD	SuckPunc	Sucker Punch	2011	3D
BackWld	Backyard Wilderness	2018	3D	SKF	JohnWick	2014	3D	WB	SuiSquad	Suicide Squad	2016	3D
BATB17	Beauty and the Beast	2017	3D	WDPD	JonasBro	2008	3D	WDPD	Sully	Sully	2016	WB
BatSup	Batman v. Superman: Dawn of Justice	2016	3D	WB	Jonsey2	2012	3D	WB	SupDogs	Superpower Dogs	2019	3D
BeauPlan	Beautiful Planet, A	2016	3D	IMAX	JRNGB	2016	PPC	SW7	Star Wars: The Force Awakens	2015	3D	
BenHu	Ben-Hur	2016	3D	CPD	Jack Ryan: Shadow Recruit	2014	3D	WDPD	SW8	Star Wars: The Last Jedi	2017	3D
BFR	Before From the Brink	2018	3D	CGI	JTG	2013	3D	WB	SW9	Star Wars: The Last Jedi	2019	WDPD
BlackPan	Black Panther	2018	3D	WDPD	JIM	2013	3D	WB	SW10	Titanic: Episode IX	2019	3D
BladeRun	Blade Runner 2049	2017	WB	JTS	Journey to Space	2015	3D	K2	TDOTM	Transformers: Dark of the Moon	2011	3D
BTBW	Born to Be Wild	2011	3D	IMAX	JTSSP	2013	3D	MFF	TermGeni	Terminator: Genisys	2015	3D
CACW	Captain America: Civil War	2016	3D	WDPD	JungBook	2016	3D	WDPD	ThisIsIt	This Is It: The IMAX Experience	2009	SPE
CapitMarv	Captain Marvel	2019	WDPD	JupiAsce	Jupiter Ascending	2015	3D	WB	Thor	Thor	2011	3D
CapitPhil	Captain Phillips	2013	SPE	JuraPark	Jurassic Park 3D	2013	3D	UP	ThorRag	Thor: Ragnarok	2017	WDPD
Cars2	Cars 2	2011	3D	WDPD	JuraWorl	2013	3D	UP	Tintin	Tintin: Adventures of Tintin: Secret of the Unicorn	2011	3D
CATWS	Captain America: The Winter Soldier	2014	3D	WDPD	JustLeag	2017	WB	TinyGian	Tiny Giants 3D	2014	3D	
Chappie	Chappie	2015	3D	SPE	JWFK	2018	3D	UP	Titanic3	Titanic 3D	2012	3D
CinCarn	Christmas Carol: An IMAX 3D Experience, A	2008	3D	WDPD	Kong: Skull Island	2013	3D	K2	TMNT	Teenage Mutant Ninja Turtles	2014	3D
CinCine	CinCine	2016	3D	WDPD	Kong: The Golden Circle	2015	3D	WB	TombRaider	Tomb Raider	2018	WB
CloudAt	Cloud Atlas	2012	WB	Kong: Skull Island	Kong: Skull Island	2017	3D	WB	Tomorrow	Tomorrowland	2015	WDPD
Commuter	Commuter, The	2018	LG	LastReef	Last Reef, The	2012	3D	GSF	TopGun3D	Top Gun 3D	2013	PPC
ConqOTS	Conquest of the Skies	2017	3D	nWP	LegiTarz	2016	3D	WB	TOITA	Titans of the Ice Age	2013	GSF
Contagio	Contagion	2011	WB	LegoBatm	Legion Batman Movie, The	2017	WB	UnderSea	Under the Sea 3D	2009	IMAX	
CrimPeak	Crimson Peak	2015	UP	LegоМov2	Legio Movie 2: The Second Part, The	2019	WB	ToyStory3	Toy Story 3	2010	WDPD	
Cuba	Cuba	2019	3D	GSF	LesMis	2012	3D	UP	TrainTime	Train Time	2019	3D
CWACOM	Cloudy With a Chance of Meatballs	2009	3D	SPE	LIAD	2011	NGD	Transformers	Transformers: Age of Extinction	2014	3D	
DarkKinR	Dark Knight Rises, The	2012	WB	LifeTree	Life of Trees, The	2014	3D	REEF	Transcendence	2014	PPC	
DarkMind	Darkest Minds, The	2018	FOX	LionKing19	Lion King, The	2019	WDPD	Trolley	Trance	2018	SLC	
DanoPhoenix	Dane Phoenix	2019	FOX	LORAOA	Living in the Age of Airplanes	2015	3D	WB	TronLeg	Tron: Legacy: An IMAX 3D Experience	2010	3D
DarkShad	Dark Shadows	2012	WB	LOP	Legends of Flight	2010	3D	K2	TrOTR	Transformers: Revenge of the Fallen	2009	PPC
D-Day	D-Day: Normandy 1944	2014	3D	K2	Logan	2017	FOX	TTA	Transformers: The Last Knight	2012	MFF	
Deadpool	Deadpool	2016	FOX	Lorax	Dr. Seuss' The Lorax	2012	3D	UP	TTK	Transformers: The Last Knight	2017	3D
DivergAl	Divergent Series: Allegiant, The	2016	SIM	LOTG	Legend of the Guardians	2010	3D	WB	TTLS	Transformers: The Last Knight	2019	B&D
Divergen	Divergent	2014	SIM	UP	MA	2012	3D	WDPD	Touch the Stars	2019	3D	
DPTP	Dinosaur Passage to Pangaea	2011	3D	CGI	MAGN7	2011	3D	WB	TutOdys	Turtle Odyssey	2018	3D
DracUnto	Dracula Untold	2014	UP	ManUNCLE	Maleficent	2014	3D	PPC	TwitClip	Twilight Saga: Eclipse, The IMAX Experience	2010	nWP
Dragons	Dragons: Real Myths and Unreal Creatures	2013	3D	B&D	Malefic	2011	PPC	TwitClip	Twilight Saga: Eclipse, The IMAX Experience	2010	SUM	
DreamBig	Dream Big: Engineering Our World	2016	3D	MFF	MazeRunn	2015	3D	PPC	UnderAwaken	Underworld Awakening	2012	3D
DrStrang	Doctor Strange	2016	3D	WDPD	Meerkats	2012	3D	CPD	UnderSea	Under the Sea 3D	2009	IMAX
DSC	DeezerChallenge 3D	2015	3D	CPD	MEG	2012	3D	CPD	UWT3D	Ultimate Wave Tahiti 3D, The	2010	K2
Dumbo	Dumbo	2019	WDPD	Megamind	Megamind	2010	3D	PPC	WildDream	Wild Dream, The	2013	WB
Dunkirk	Dunkirk	2017	WB	MIB3	Men in Black III	2012	3D	SPE	WildDream	Wild Dream, The	2013	WB
DUTA	Dinosaurs Under the Aurora	2012	3D	D&D	MIBI	2019	3D	SPE	Wildlife	Wildlife	2016	3D
DWHD	Deepwater Horizon	2016	LG	MICOB	Mortal Instruments, City of Bones, The	2013	3D	SPE	WOTA	Wonders of the Arctic	2014	3D
EarthFli	Earthflight	2017	3D	GSF	MIF	2018	3D	PPC	WOTT	Wrath of the Titans	2012	3D
EarthWin	Earth Wins, The	2013	HFL	MIGP	Mission: Impossible -- Fallout	2011	PPC	WDT	Wrinkle in Time, A	2018	WDPD	
Electrop	Electropolis	2014	3D	CPD	MIRN	2015	3D	PPC	WTP	We, The Marines	2017	MFF
Elysium	Elysium	2013	SPE	MJTA	Mission: Impossible -- Rogue Nation	2015	3D	PPC	WTPWTA	Where the Wild Things Are: The IMAX Experience	2009	WB
EnderGam	Ender's Game	2013	LG	MHHGMA	Mamma Mia! Here We Go Again	2011	3D	UP	WV	Wonder Woman	2017	WB
EOT	Edge of Tomorrow	2014	3D	SPE	MNMF	2011	3D	WDPD	WWDP3D	Walking With Dinosaurs: Prehistoric Planet 3D	2014	3D
Equalizer2	Equalizer 2, The	2018	3D	UP	MONTW	2008	3D	PPC	xxX	Return of Xander Cage	2017	3D
Everest3D	Everest	2016	3D	UP	MONTW2	2019	3D	PPC	Zootopia	Zootopia	2016	WDPD
ExpChesa	Expedition Chesapeake	2019	B&D	MOUNTS	Mysteries of the Unseen World	2013	3D	CPD	Zootopia	Zootopia	2016	3D
ExtrWeat	Extreme Weather	2016	3D	CPD	MounQues	2013	3D	CPD	Zxx	Return of Xander Cage	2017	3D
FastFive	Fast Five	2011	UP	MRDC	Mountain Quest	2018	3D	WB	Zootopia	Zootopia	2016	WDPD
FBAWTFT	Fantastic Beasts and Where to Find Them	2016	3D	WB	MTTM	2008	3D	SKE	Zxx	Return of Xander Cage	2017	3D
FBTGCG	Fantastic Beasts: The Crimes of Grindelwald	2018	D	WDPD	MTTN	2013	3D	IMAX	Zootopia	Zootopia	2016	WDPD
FDS	Final Destination 5	2011	WB	Mummy	Mummy, The	2017	3D	UP	Zootopia	Zootopia	2016	3D
FindDory	Finding Dory	2016	3D	WDPD	MVA	2009	3D	PPC	Zootopia	Zootopia	2016	3D
Firendou	Firendou, The	2016	3D	WDPD	NATM2	2012	3D	PPC	Zootopia	Zootopia	2016	3D
FishMon	Flying Monsters 3D	2011	3D	CPD	NATM3	2013	3D	WB	Zootopia	Zootopia	2016	3D
Focus	Focus	2015	WB	NewMutant	New Mutants, The	2014	3D	PPC	Zootopia	Zootopia	2016	3D
ForGump	Forrest Gump	2014	PPC	PIA4	Noah	2014	3D	PPC	Zootopia	Zootopia	2016	3D
FOTB	Flight of the Butterflies	2012	3D	SKF	Nun	2018	3D	WB	Zootopia	Zootopia	2013	ISP
FoF	Fate of the Furious, The	2017	UP	OBIVI	Nun, The	2018	3D	UP	Zootopia	Zootopia	2013	WB
Frankenkw	Frankenweenie	2012	3D	WDPD	Ojarumar	2009	SAR	Zootopia	Zootopia	2016	3D	
FreeSolo	Free Solo	2019	IMAX	OOB	Out of Bounds	2013	3D	GSF	Zootopia	Zootopia	2016	3D
Frozen2	Frozen 2	2019	WDPD	PAZ2	Oceans: Our Blue Planet	2013						

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Distributors' abbreviations are listed in **bold**.

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Classified Ads

POSITION SOUGHT

Hi everyone!

It's been one of the great privileges of my life to serve this incredible community. Most of you know that I have spent a big part of my career at **Evans & Sutherland** advocating high resolution digital dome systems, producing original full-dome digital shows, and distributing converted giant screen content for these systems. Most recently I served as the Director of New Business Development for **Mouse-trappe**, an experience design and production studio in Burbank, CA.

Currently I am seeking a creative role in the production of original giant screen films and other immersive digital content that can integrate experience design to immerse audiences in emotionally resonant and unforgettable ways.

I am a broadly skilled writer/producer/director specializing in immersive media with a reputation as an excellent collaborator, and proficient at guiding projects from concept through production. I am a confident leader, a self-starter, highly motivated, with effective interpersonal skills and a strong creative vision.

I am a highly social and personable professional possessing strong relation-

al skills, well respected and admired by his colleagues and coworkers. I'm proficient in international business.

I am also an engaging and entertaining public speaker and educator with extensive experience speaking to audiences of all sizes at the university level and at public conferences both domestic and international. I know I could be an invaluable asset to your team.

I would love to discuss potential opportunities with you.

Thanks!

Michael Daut

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SHORTS

Free GSCA webinar on Jan. 29

The Giant Screen Cinema Association will hold a free webinar on at 1:00 pm EST on Jan. 29 to highlight the award-winning “year of the engineer” program that **Discovery Place** in Charlotte, NC, developed in 2017. The museum established partnerships with 250 leaders in science, technology, engineering, and math (STEM) and provided 2,500 experiences that exposed 250,000 guests to “the wonders of STEM,” using **MacGillivray Freeman Films**’ GS film *Dream Big* as a key component.

The webinar will explain how Discovery Place’s divisions cooperated to create the program and will show how the techniques can be applied for other projects at other museums.

For more information and to sign up, visit giantscreencinema.com.

2018 IMAX box office tops \$1B

For the first time, annual worldwide box office grosses for IMAX films exceeded \$1 billion in 2018, with 10% coming from local-language films in international markets such as China, South Korea, Japan, Russia, and India. The company had been approaching the milestone for the past two years, taking in \$965.7 million in 2016 and \$976.5 million in 2017.

Six of the top ten grossers featured “IMAX DNA,” meaning that they were either shot with IMAX cameras or included sequences with a taller aspect ratio exclusively in IMAX theaters. The top ten included four **Marvel** titles – *Avengers: Infinity War* (\$143.6 million), *Black Panther* (\$81.1 million), *Venom* (\$42.8 million) and *Ant-Man and the Wasp* (\$32.1 million) – as well as *Jurassic World* (\$66.8 million) and *Mission Impossible: Fallout* (\$53.6 million). Of the local-language titles, eight of the top ten were Chinese productions.

St. Paul’s Mike Day to retire

Mike Day, executive vice president of the **Science Museum of Minnesota** has announced that he will retire next year, ending 40 years at the museum and in the giant-screen business. Day started at the museum in 1978 as a new building, housing the original IMAX Dome, opened, and worked alongside **Mike Sullivan**, the theater’s founding director, who had come from the world’s first IMAX Dome theater, in San Diego. In the fall of 1978, St. Paul’s Omnitheater hosted the first GS industry association meeting, the Space Theater Consortium, predecessor to the **Giant Screen Cinema Association**.

Day served as executive producer for

seven GS films that SMM produced from 1981 to 2002, including *Great Barrier Reef* (1981), *Ring of Fire* (1991), *Tropical Rainforest* (1992), and *Jane Goodall’s Wild Chimpanzees*

(2002). In 2010 he was one of the founders of the **Giant Dome Theater Consortium**, a group of seven theaters that fund production of films intended for the dome. The group has supported *Tornado Alley* (2011), *National Parks Adventure* (2016), and *Cuba* (2019).

In 1999, when the museum moved to a new building, Day oversaw the construction of a new Omnitheater that was convertible between dome and flat-screen projection. It is one of only two such theaters extant today.

Although he is officially retiring on March 3, Day told a local newspaper that he will work one day a week through the summer to oversee the completion of a \$26 million renovation of the building and the conversion of the theater’s projection system from 15/70 film to digital. (The brand of the digital system has not been officially announced.)

Maarten Roos to rep BIG & Digital

Las Vegas-based distributor **BIG & Digital** has named **Maarten Roos** to represent its films to giant-screen and fulldome theaters in museums and planetariums in Europe. Roos is a planetary scientist who has been working as a freelance filmmaker since 2007, managing over 70 productions in the areas of science, technology, medicine, music, and art. He also teaches film and editing workshops in collaboration with the Oxford Documentary Film Institute.

He can be reached at mroos@biganddigital.com.



Mike Day



Maarten Roos



Marvel’s *Avengers: Infinity War* was the top-grossing IMAX DMR film of 2018.